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The American Journal of
CLINICAL MEDICINE
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Neglected Opportunities in the Therapy of Tuberculosis

IN the old days, before the bacterial origin of tuberculous disease, and especially of pulmonary tuberculosis in all its stages, had been demonstrated, this malady had been attributed to virtually everything that can produce illness in man. Equally, there was hardly a remedy in the materia medica that had not been advocated and administered at some time or other in the treatment of pulmonary consumption.

After the bacillus of tuberculosis had been discovered, and, still more, after the various microorganisms concerned in the associated infections existing in open pulmonary tuberculosis had become known, the value of drug treatment in this disease was doubted, more especially by those leading clinicians who manifested a strong leaning to the views suggested by the bacteriological theory of disease causation. It was then that the assertions of men like Bodington, Herman Brehmer, and a few others, were accepted (long after their originators had died) and the treatment of tuberculous disease came to be comprised in: Rest, Nutrition, Fresh Air.

These three remedial agents, excellent as they are, were utilized with such extreme exclusiveness that many physicians considered even the symptomatic employment of drugs for the alleviation of passing distressful conditions as needless: True, general practitioners and many experienced tuberculosis physicians made generous use of many drugs that might aid in increasing the comfort of patients by relieving them of many complications. However, the successful treatment of tuberculous patients was claimed loudly to depend almost entirely on those three remedies.

Now comes Dr. Edwin B. Tuteur, of Chicago, an experienced tuberculosis physician, who has the courage to rise in a meeting of the Chicago Medical Society and to insist that there are many things that may be used to great advantage in

the treatment of tuberculous patients which at best is a long and tedious matter. He maintained, in a paper read on June 10, that opinions and suggestions offered by members of the medical profession in active practice, leading to the employment of many meritorious measures, had not received merited and proper attention and encouragement by those in a position to speak authoritatively in matters concerning tuberculosis. He claimed that, surely, out of the well-ordered life of every serious-minded physician, there must be something of value, something good, something sure, sensible or right, something born of the long years of thoughtful work, experience and study, something at least that might point the way to a better and surer therapy in the general treatment of this disease.

In addition to the general hygienic-dietetic methods of treatment, and in addition, be it added, to the immunizing stimulations of the socalled specified remedies, or bacterins, further, in addition to physical and mechanical remedies, such as, hydrotherapy, various electric modalities, heliotherapy, massage, and so forth, Doctor Tuteur expressed himself as a firm believer in what he might term internal stimulation, as well as in external stimulation. Increased physiological activity might, he asserted, be obtained not alone through physiotherapy but through stimulative medicinal agents administered internally. This increase of physiological activity is the prime essential to increased metabolism, which, in turn, means a restoration in all or part of the depleted physiological functions.

Like Professor Solis-Cohen, Dr. Beverly Robinson, Dr. Frederick Tice, and others, Doctor Tuteur insists particularly upon the great value that digitalis can manifest in correcting circulatory disequilibrium. In simple failure of cardiac function, in chronic cardiac exhaustion, and where there might be mitral cardiac degenerative changes, the judicial use of digitalis is of inestimable value.

Another cardiac stimulant of great utility is strychnine, which is not only a powerful heart stimulant but also a potent remedy increasing and supporting the action of the nervous system. Doctor Tuteur, however, deplores the comparatively large doses that are given customarily and too far apart; that is, three or four times daily. This, he believes, results in a more or less violent jacking up of the heart and a subsequent corresponding reaction through which its best effects are lost largely. He prefers administering small doses, say, 1-200 grain, every two hours, and has found the nitrate of strychnine superior to the sulphate. The indicated dose should be repeated until the proper cardiac response is manifest and thereafter as much as is needed to hold the heart action steady.

Another circulatory and general stimulant is suprarenal substance, or its alkaloid, epinephrin (adrenalin). This is found efficacious where there is marked asthenia, hypotension, subnormal temperature, suboxidation and exhaustion. It frequently causes a rapid disappearance of the fatigue syndrome. It may be employed either alone or in combination with small doses of thyroid which appears to act synergistically and to enhance the therapeutic effect of the adrenalin.

The present writer desires to point out that thyroid has fallen somewhat into disrepute or proved discouraging because of the large doses in which it was, and often is, administered. We have found, in our observation, that ¼ grain or even 1/12 grain, once daily, is quite sufficient in many cases to supply the required stimulation. There are cases, of course, where as much as 1 grain, three times daily, may be given to advantage. As a rule, though, the smaller doses are to be preferred.

While we are on the subject of internal-secretion products, we wish to call attention also to the manifest benefit secured very often from the administration of pituitary substance (the whole gland). This is useful for remedying the clearly insufficient function of the pituitary gland that obtains in many tuberculous patients.

Of the various remedies used in the treatment of pulmonary tuberculosis, nuclein has, perhaps, rendered to Doctor Tuteur the best service. In combination with the cacodylate of sodium or of iron, or both, it has given even better results. This observation is exceedingly interesting to us, because it confirms the results of our own experiences with these valuable drugs. The three of them can well be combined being administered hypodermic-

ally or intravenously, thus saving the digestive apparatus for its necessary work and, besides, securing prompter absorption of the drug and a more immediately beneficial effect. Further, Doctor Tuteur is convinced of the favorable influence of iodine in pulmonary tuberculosis. This drug, he says, must be used in fairly large doses and its use must be persevered in to get the maximum effects. Iodine possesses great merit, especially where the glandular tissues are involved. Where a tendency to hemorrhage exists, we have found it should be used with caution.

There are other good things that Doctor Tuteur mentions in this interesting paper, a report of which appeared in the *Official Bulletin of the Chicago Medical Society* for July 10 (p. 21). Unfortunately, we are informed, this article has not been printed elsewhere. It is to be hoped that it will find early publication and general reading.

Doctor Tuteur's paper is timely and, also, it is of very great value in as much as it confirms the general practitioner in his constant contention made, for many years, that the hygienic-dietetic treatment of pulmonary tuberculosis, however excellent, is not sufficient but that other measures are required to secure successful and satisfactory results. It is to be hoped that these reasonable and sane teachings will find widespread acceptance because such an event could result only in good to a great many tuberculous patients.

He who loves not books before he comes to thirty years of age will hardly love them enough afterwards to understand them.—Clarendon.

INFORMATION, KNOWLEDGE, WISDOM

When the young physician is graduated from medical school, his diploma informs all men to whose attention it may come that its possessor has complied with the rules and regulations of the institution granting it, that he has taken the prescribed course of study and has given evidence of it by passing a successful examination.

Time was, when that meant solely that the young doctor of medicine had amassed a certain amount of theoretical information, almost entirely through attendance at lectures and recitations, which then had to be turned to actual knowledge, by experience, in the practice of medicine.

At the present time, fortunately, the successful passing of the examinations demanded by most medical schools before granting a degree means, in addition, that the candidate has acquired a certain amount of practical experience in clinic and hospital by actual attendance upon patients, under the supervision of his teachers. Moreover, at the present time, most medical colleges insist that the preparation for acquiring the degree of Doctor of Medicine should include at least one year's hospital service as interne, where, of course, a great amount of clinical experience is accumulated. Further, many recent graduates prolong their hospital service before venturing into the active life of practitioners of medicine.

This recent development of the curriculum in medical schools is fully justified. The young graduate of a generation ago had but his theoretical information and was innocent of any actual knowledge concerning medical problems; for, information is not knowledge. Medical information comprises only that that is imparted by word of mouth or by reading, and it enables its possessor to transmute it into knowledge by employing it in practical life, by making use of it in treating sick patients. Every experience in practice increases the stock of knowledge possessed by the practitioner. As the knowledge is extended and is made to apply for the greater benefit of sick persons, in time, wisdom is acquired and the physician whose information and knowledge have grown with the passing years will develop in addition medical wisdom that will crown his abilities as a true practitioner of medicine.

While the young graduate, undoubtedly, has a great deal of information that is beyond that of the seasoned practitioner, and although he likewise has acquired a fair degree of knowledge through his experience in clinics and hospitals, all this has become his while working under the steadying and controlling supervision of his teachers. Even the most brilliant graduate finds himself at a loss, sometimes, after he has gone out, "on his own hook", to deal with disease as he meets it in the practical exercise of his calling and when

he can no longer refer every little problem or difficulty to his instructors. It is then that the industrious application of his acquirements—information and knowledge—will lead to medical wisdom.

Unfortunately, some medical men there are who never do acquire wisdom, whose very knowledge is woefully limited, simply because they are too negligent to benefit from the lessons that each individual case carries with it. It is not that man who is "in business" for the best-possible emoluments, that gains the greatest wisdom; it is rather he who is a physician in the true meaning of the word, who first of all wants to help the sick, taking the financial side as a necessary accompaniment, true; but, still, as subordinate to his life's work, that of the practice of medicine.

Information and knowledge are important parts of the equipment of medical practitioners. Both are indispensable for good work. However, if information and knowledge comprise the sum total of the physician's mental acquirements, if he fails to gain wisdom as well, he will ever remain but a technician, a journeyman worker, a "mechanic." It is only through medical wisdom, gained through experience not only of the mind but also of the heart, that a practitioner of medicine can become a true physician.

When a book raises your spirit, and inspires you with noble and courageous feelings, seek for no other rule to judge the work by; it is good, and made by a good workman.—Bruyere.

"HOW DO YOU DO?"

We submit the thesis, that the salutation customary in English-speaking countries, namely "How Do You Do?" has an unfavorable psychic effect. Take a person who "enjoys poor health," and this question, put by way of greeting, invariably will set in motion a train of ideas that causes him to be introspective, picking out and investigating his various pet ills, or ailments, in order to ascertain whether they are still in evidence. It frequently happens in the case of some people that, on being accosted by a friend or acquaintance with a never so cheery "How Do You Do?" they respond only after a pause of self examination and then invariably enumerate their various physiological processes that "do" poorly. Of course, we say "Good morning" and "Good evening," both of which are preferable to "How Do You Do?" but, "Good day" seems to be reserved for leave-taking, while "Hello" is meaningless and not quite—well, just not quite—. Still, is it not possibly connected with the old "Hail!"?

It is strange that the English-speaking people are the only ones among civilized nations that use this particular form of greeting. The French accost their friends and acquaintances with *Bon jour,* meaning, good day, and only then inquire solicitously *comment vous portez-vous* (how do you carry yourself?). The Germans likewise say *Guten Tag,* following this up with *wie geht's?* (how goes it?). The Swiss usually say Guten Tag, like their German neighbors, although the old-fashioned people, and also those in the mountain districts, usually greet you with *Gruezi,* meaning *Gruess şie Gott* (God greet you), a form of allocution that, by the way, is quite customary also in the southern German states. Incidentally, it gives one a peculiar impression, in the good old Swiss city of Basel, to be greeted invariably with *Adieu,* which, as everybody knows, is the French parting wish, and corresponds to the English "Goodbye."

The Danes wish you *God Dag* (Good day), as do also the Swedes and Norwegians, which frequently is followed up with an inquiry as to one's health. The Italians, likewise, first wish each other *Buon Giorno,* before inquiring: *Come sta?* The Spaniards, like most other people, say *Buenos dias* and then inquire *¿Como está usted?*

Aside from the old-fashioned Swiss greeting, none is so cheery and so full of unconscious poesy as were the old Roman and Grecian greetings, the Romans meeting each other with *Salve,* meaning "Hail," while the Greek pronounced the exhortation *chairete* "Be joyful," or, "rejoice." As is well known, the strictly monotheistic Moslem on greeting, asserts that "God is great", while the followers of John Alexander Dowie express the beautiful wish, "Peace be with you."

We submit that all these forms of greeting, whether wishing one another a good

day or expressing the injunction to rejoice, carry more cheer and are less suggestive of the, possibly, unpleasant than is the invidious question "How Do You Do?" It might be well if we could go back to ancient Saxon days when the greeting "Hail" was not infrequent. Or, we might adopt the Irishman's hearty "Top o' the marnin'" (even though we may not be able to imitate his rich brogue) as he dofs that relic of "ould dacency", meaning "the hat me feyther wore." Of a certainty, such a greeting, far from having any depressing effect, rather makes one feel as if he had had a bracer.

Although it does not come strictly within the subject of this discussion, it may be mentioned that, on parting, all nations and languages alike command their departing friends, and enemies, to the Divine protection and guidance. *Goodbye* (God be with you), *Adieu* (I commend you to God), *Adiós, Diós le guarde, Vaya Vd. con Diós, Addio, B'hueti Gott,* (God keep you), all have the same meaning. In most languages, also, a wish for future meetings is expressed; thus, *au revoir, a rivederci, hasta la vista,* and *auf wiedersehen.* Strangely enough, the English language does not possess a parallel parting wish, unless the slangy "see you later" may be taken for it. *Leben sie wohl* coincides with the laconic Roman *Vale* which is equivalent to the English "Farewell." With this good old greeting, we will close the present chat.

Books are the true levellers. They give to all who faithfully use them the society, the spiritual presence, of the best and greatest of our race.—Channing.

FALL AND WINTER DISEASES

Time passes, as several other profound philosophers have declared before us, and we are no sooner through the summer, with its peculiar and characteristic demands upon our resources, than fall comes apace, soon to be followed by winter. The fall and winter ailments have characteristic features of their own, and it always is well to call attention to them.

To that end, we want letters from readers of CLINICAL MEDICINE, discussing this particular problem. Sit down and write, telling us of your treatment of "colds", of your management of patients ill with influenza, pneumonia and kindred diseases; tell us what you do in the case of other affections that are prevalent, more particularly, at this season of the year.

But, hustle up, do! We have to have the manuscripts before the eighth of the month if they are to be published in the succeeding issue. So, don't wait too long.

In this issue, we print something on influenza and on pneumonia. It is not too early to prepare for these serious maladies. We have several other good articles to come later.

AN "ELECTRIC" NUMBER

It has been suggested that we issue, in the near future, a number of CLINICAL MEDICINE that is to be devoted entirely to the use of electricity as a therapeutic agent.

This is a matter that we want to put up to the readers. If enough of you manifest your desire for such a number, and if a sufficient number of you are willing to do your share by sending us contributions, we shall be happy to give up the space of one issue to the subject of electrotherapeutics.

Now, what do you say?

AN APPRECIATIVE CLIENT

Some months ago, we received, by way of Denver, Colorado, a newspaper clipping to the effect that a certain Chicago surgeon, having performed a successful operation on the wife of a hotel man, made a charge of $14.00; that is to say, $1.00 for each minute that the operation had occupied. Thereupon, the appreciative husband wrote out a check for $14,000, saying that, to pay $1,000 a minute, was not too much for saving his wife's life.

We are wondering whether this is a newspaper yarn or whether it is based on fact. For once, we turned reporter and asked that Chicago surgeon outright concerning the matter. Unfortunately, he did not loosen up and we have no authoritative information concerning the occurrence.

Wouldn't it be nice, though, if those men who have a healthy bank account would write out their checks in payment for physicians' services in accordance with what the work of the medical man actually is worth to them?

To carry a man or a woman safely through an attack of typhoid fever, of

pneumonia, of influenza, to guard a child through scarlet fever, measles, or other acute febrile diseases, is just as important and means just as much to the patients themselves and to their families as does a life-saving operation. If, now, the husband or father is in possession of sufficient of this world's goods, would it not be nice and proper if he were to pay at least a reasonable portion of the sum that he would be willing to put up were his wife or child in immediate danger of death and he had it in his volition to purchase life and health promptly by paying down a large sum?

When ransom is demanded, after kidnapping, it usually is a question of tens or hundreds of thousands. A successful business man usually values his wife's or his child's life at the least at ten to twenty thousand dollars. Instead of paying grudgingly a bill for services rendered at so much per, and perhaps demanding an itemized statement, it would be more dignified to make out a good-sized check?

There is another thing, though; physicians should charge a lump sum for attendance on cases of definite disease, just as surgeons do for operations. Attendance on a difficult case of labor, on a case of typhoid fever, of pneumonia, of scarlet fever, and so forth, should bring to the attendant anywhere from $100 to $1,000, not only according to the severity of the illness in the particular case but also in accordance with the financial standing of the husband or father and his ability to pay.

To acknowledge our faults when we are blamed, is modesty; to discover them to one's friends in ingenuousness, is confidence; but, to preach them to all the world, if one does not take care, is pride. —Confucius.

VOTES FOR WOMEN: WHY NOT?

Well, at last women have suffrage. The thought does not worry us as it does some. We feel quite sure that women can do no worse with their votes than men have heretofore done. They may do better; we hope so. It may even be that they will rectify many of the mistakes that men have made at the polls in recent years. At any rate, it does not, to us, seem likely, as some allege, that our women through excessive sentimentality will run our "ship of state" upon the rocks.

The truth is, that women as a sex are not what men as a sex suppose them to be. A great many views and virtues and other things are imputed to them by the sterner sex which are not really theirs; these views and virtues and other things have been imputed to women so long by their erstwhile lords and masters that the latter, who at first knew better, have almost forgotten the sophistry. Nor have women, excepting a few solitary rebels, dared to remind them of it. But, a stupendous surprise is in store that will shatter the wrapt complacence of the male contingent. It will come when the female of the human species, no longer under dominance, is at last in position to assert herself without fear and to reveal herself to the eyes of the world as she honestly is.

Woman now is supposed to be absurdly moral, religious, romantic. Such qualities, while outwardly praised, are inwardly regarded by the opposite sex with some disdain as mere weaknesses; the same qualities in men are said to make mollycoddles of them. In reality, though, woman is not all that, at all. Further she is believed to be firmly and unreasonably set against divorce, cigarette-smoking, gambling, indulgence in pilsner, and all that. But, in reality, again, she is not. At least, not every one of her; not even the majority. Her attitude towards the amenities of life is quite as sane as, if not indeed more so, than, that of the male.

Oh no, we venture to say that women will do humankind no great harm with their votes. It may even come about that they will accomplish positive good. Man with his boasted superior reasoning powers and with the exercise of his massive intellect has, it must be admitted, made rather a sad mess of it, in recent years. Let woman employ her "intuition." We have an idea that she will do much good, bring about many improvements, and, in truth, we have no fear of harm coming to the country through woman's suffrage; neither politically, nor socially, nor economically

SPECIFIC BACTERIN THERAPY

In an article entitled "Specific Bacterial Therapy", which appears in another department of this issue of CLINICAL MEDICINE, the author, Doctor Sherman, makes the point that, aside from the specific immunizing response produced by injections

of a bacterial vaccine, or bacterin, in cases of infectious disease, there occurs likewise a non-specific reaction, the cause of which is not so clear, but which, nevertheless, indicates that an exclusive bacterial diagnosis in any case of bacterial invasion that is to be subjected to bacterial therapy is not absolutely essential.

In support of his conclusions, Doctor Sherman, quotes Sir Almroth Wright, who, it will be remembered, is one of the foremost immunizators of the day. In an instructive article published in *The Lancet*, for March 29, 1920, and quoted by Sherman, Wright recalled the observation that, after antiplague inoculation, that is to say, after bacterial treatment of plague, coexisting eczema, gonorrhea, and other miscellaneous infectious diseases had improved. Also, in cases of pneumonia, inoculations of pneumococcus bacterin have materially reduced the mortality not only from pneumonia (by 85 percent), but also that from other diseases (by 50 percent).

The conclusion is, that we must accept the view of a "collateral" immunization that is produced in addition to the "direct" immunization as it is stimulated by a certain bacterin against the related bacterial disease.

These observations, that secondary, coexisting injuries in the organism were improved through the specific immunization against the principal infection, are explained readily, if it is remembered that the principal bacterial disease which we are called upon to treat by means of bacterins, usually has become established because of a lower resistance of the organism to a particular infection. By enabling the defensive provisions of the body to cope with this, the organism usually is put into a position to combat any other existing or coexisting troubles due to bacterial activity. The immunizing response to one or another bacterial stimulation having been established and having resulted in an increased immunity to the related infection, the defensive body cells are put in a condition of training, as it were (as it is described ingeniously in Petruschky's "Grundriss"). and have become able to react to other microorganisms as well, and to oppose their injurious action upon the body. It follows that the organisms can in such a manner be put into a position to cope with other, coexisting minor bacterial troubles and without any special immunization being supplied.

There is another point to be considered in this connection, which relates to the specific nature of the bacterial vaccines, or bacterins; namely, the question of whether it is permissible to use multiple, or polyvalent bacterins, that is to say, whether the bacterin should contain one species of bacteria or whether it may contain several. This question has been discussed academically to the disadvantage of polyvalent bacterins, although the taboo placed upon them by certain scientists on "scientific" grounds is not supported by experience.

It is asserted that a combined bacterin is like that awful and horrible thing, a shotgun prescription. It is claimed that it is unscientific and should be avoided. Unfortunately for science and scientific ratiocination. Nature is by no means "scientific" in that sense. Indeed, Nature does not hesitate to infect the human and animal organisms with multiple, or polyvalent, microorganisms and, naturally, the clinical symptoms and changes stand in relation to the harmful action of all the various bacteria. In practice it often is quite impossible to determine exactly just which one of a number of pathogenic microorganisms, found on bacterial diagnosis, is most likely to be the principal causative agent of existing disease and, hence, indicated as a means for specific immunization. It is much more reasonable to suppose that all of them, the whole conglomeration of bacteria that are present, have contributed to bring about the pathologic condition. Therefore, it is only sensible to employ combinations of bacterial vaccines, or bacterins, in other words to employ a polyvalent bacterin, if such a method of treatment be permissible at all. It is safe to say that clinical results are decidedly in favor of combined bacterins against the less satisfactory results of monovalent bacterins.

It is quite possible that the observed collateral response to socalled specific immunization may be the result of collateral immunization produced by coexisting components of a combined bacterial vaccine or bacterin.

Undoubtedly, the theory based upon the observations of recent years, concerning the favorable action of typhoid bacterin in relation to affections like rheumatism indi-

cates clearly that there does occur such a thing as a nonspecific reaction. This is an important factor, and constitutes a problem which is an essential part of the whole discussion. The point of immediate interest is, that a collateral immunizing response may occur and that usually the resulting reaction is of benefit. Just how this process is brought about, is not quite clear as long as our ideas are governed by the principle of specific reactions.

However, the problem of the nonspecific-protein reaction is certain to be solved in time. The important practical point is, that bacterial immunization may be practiced even before a strictly "scientific" diagnosis has been made. And, even if we can not produce a decided reaction, the results will be beneficial. Further, it is permissible and justified to employ polyvalent vaccine or bacterins and these need not be autogenous, for, stock bacterins often give even better clinical results.

Lucky is he who has been educated to bear his fate, whatsoever it may be; by an early example of uprightness, and a childish training in honor—Thackery, "Pendennis."

THE PHOSPHATIC INDEX

Dr. J. Henry Dowd's article on "The Phosphatic Index," which appeared in the August issue of CLINICAL MEDICINE (p. 519), aroused a great deal of interest among the readers of the Journal, as is evidenced by the fact that Doctor Dowd himself received, and replied to, far in excess of one hundred letters, while we ourselves responded to a good many requests for further information.

That proves two things: First, that CLINICAL MEDICINE is read by its subscribers, no matter what may happen to other medical journals; second, that the communications that we print are acceptable and of interest to our readers; for, the avalanche of inquiries regarding this particular article is just one instance. We are constantly in receipt of letters referring to certain articles that have appeared, and so are their authors.

We are happy to be able to print a further communication from Doctor Dowd, which will be found among the leading articles in this issue of CLINICAL MEDICINE (p. 667), and we feel confident that Doctor Dowd will continue the good work and favor us occasionally with some of his helpful and instructive contributions.

Incidentally, let it be said that Doctor Dowd is a busy practitioner. He is not an academician but a "practical" physician who, despite the strain and worry of his practice, finds time to undertake special investigations and to write about them.

Now, what's the matter with your doing the same? Every physician should take up one or more subjects for special investigation and should pass out the information secured for the control, criticism, confirmation or discussion of his colleagues.

We have said it so often, still, we must repeat it. We want to have CLINICAL MEDICINE the round-table around which all our busy brother physicians sit, discussing points that occur to them in their practice that have puzzled them and that they have solved, or not. We want the results of your cogitations and your investigations. They will be useful for others, just as you yourself have learned from them.

CHILDLESS FAMILIES ARE UNDER THE BAN

At last, the worm has turned. From St. Joseph, Missouri, comes the news by way of an Arkansas newspaper that a St. Joseph banker is building a row of houses for rent to families in which there are children. This wise citizen, who possesses a true insight into the needs of the nation, is Walter P. Fulkerson, St. Joseph banker. In his houses, newly-married couples also will be admitted with the provision, however, that if there are no children in the family at the end of one year's residence, they will be asked to vacate. Whenever a child is born in one of his houses, Mr. Fulkerson announces, the rent for that month will be returned to the tenant.

The houses are in one of St. Joseph's most desirable residence districts.

The decision to adopt this method of tenancy was reached, Mr. Fulkerson said, by reading the number of advertisements in the daily papers which carried the line "no one with children need apply."

"It's all wrong," the banker said. "There should be every incentive for rearing children instead of trying to force families into race suicide."

This, undoubtedly, is a step in the right direction. The prevailing custom of dis-

criminating against families with children in the renting of houses and apartments is unjust to say the least.

Not, but what we can understand the landlord's viewpoint.

For one thing, children have no business in small apartments, for the reason that they cannot develop healthily and wholesomely; there being altogether too much repression of their natural, healthy exuberance, too many "don'ts," too many "keep stills." Families with children should live at the outskirts of the city or beyond the city limits, in houses that may be small but should be surrounded by sufficient space to offer ample play grounds for the youngsters. It must be admitted that the modern city child is lacking in many respects. Physical development is often curtailed because of the lack of suitable and appropriate opportunity to let off steam, to yell and exercise; opportunity that should be possessed by every healthy youngster.

The building of houses designed especially for families with children is a movement that should be fostered and that possesses great possibilities for good. These houses need not be finished in the elaborate and luxurious manner demanded ordinarily in "nice apartments." Indeed, the simpler the finishing is, the better it will be, because the youngster simply cannot be kept from marking and scratching and doing other things to walls, wood work, and wall paper. However, if deliberate provision is made for the children who are to inhabit these domiciles, there is no reason why they should not be welcome tenants. Certainly, that St. Joseph banker deserves the thanks of Young America for his sensible attitude and undertaking.

It is nearly an axiom that people will not be better than the books they read.—Dr. Potter.

SUCCESS IN TREATING CONSTIPATION

Patients often and doctors not infrequently are discouraged at the results obtained in the treatment of constipation, that almost universal complaint of the American people. This discouragement is due to the fact that patients do not know, and doctors may temporarily forget, one of the chief characteristics of the nervous system, namely, the fact that, if a mild irritant be applied to any part of the body, the reaction at first produced gradually grows less and less until at last it has been reduced to nothing; in other words, complete tolerance has been established.

Now, a cathartic acts as a more or less powerful irritant to the nerves of the intestinal mucous membrane causing increased activity to follow. But, if the use of that same cathartic be continued, the intestinal nerves gradually acquire a tolerance of it, and it ceases to act as a cathartic. Increasing the dose will again produce an effect, but, at last, complete tolerance is established and the patient complains that the remedy has lost its effect. However, the doctor should assure him that this result is no ground for discouragement. It is merely an example of a beneficent provision of nature permitting the body to adapt itself to diverse conditions. Nature gives us a good deal of leeway in regard to the conditions under which we can exist with safety and comfort. Many familiar instances of this truth could be cited.

For example, we put on woolen underwear on the approach of winter and, at first, the irritation of the nerves of the skin is almost unendurable. But, in a few days, the skin acquires a tolerance of the wool and the wearer is in comfort.

A person begins to wear artificial teeth and, at first, finds them most uncomfortable; still, after a time, the annoyance grows less and less so that, finally, he is unconscious of their presence.

A child has croup and we introduce a tube into the larynx. The irritation is so intense that the child coughs incessantly and the tears stand in its eyes. The agony is all but unendurable; gradually, though, a tolerance for the foreign body is established and, at last, the child rests in comfort.

In treating constipation, there is another characteristic of the nerves which we must bear in mind and which paves the way to successful treatment, namely, that, although the intestinal nerves have their sensibility to a particular drug blunted by its constant use, *that sensibility returns if the use of the drug be suspended.* In those few words lies the key to success in the treatment of constipation.

To illustrate, we will take a familiar example. We find by experiment what laxa-

tive works well with a given patient. He takes that remedy, say, 1 grain of phenolphthalein every second or third night (not every night). When it shows signs of losing its effect, we give 2 grains. When that no longer suffices, we may give 3 grains. Perhaps we choose not to go beyond 5 grains, so, when that dose is no longer effective, we change to aloin. When the limit of dosage has been reached with this drug, we may change to podophyllin. By the time we have used this as long as desirable, the bowel will have recovered its sensibility to the one first used. Thus we may go through the circuit of three remedies as often as we choose, until a correct habit has been established by the intestine to replace the bad habit of constipation. Of course, it will be understood that any other remedies may be used in place of the three mentioned. It is the principle that is important—the principle that a blunted sensibility of the intestinal nerves can be restored by changing for a time to a laxative that acts in a different manner.

We must also bear in mind the importance of proper diet, of drinking freely of pure water, of exercise and fresh air.

The frantic efforts of those who are interested in supporting de'usions must always end in defeat.—Draper, "Conflict Between Religion and Science."

IT OCCURS TO US THAT . . .

It is very deplorable that no clever scintillations occurred to us the last few months. We plead in extenuation the heat, the disinclination to do more than necessary work during the hot term—in short our laziness.

—

It is better to be a good doctor for poor people than to be a poor doctor for rich people.

—

With the cup that cheers gone, it would be adding insult to injury if the W. C. T. U. were to succeed in its nefarious (we said, *nefarious*) intention of depriving us of the solace of pipe, cigar and even "coffin nails" as well.

—

Vacations are desirable—hitherto enjoyable—things, but, before you start on yours this year, it would be well to carefully estimate your available resources, also to carry along an extra pair of stout shoes. You may have to walk home. The gentle rustic is sitting in at the game of "grab" and raises the ante with distressing regularity.

—

Those persons criticize most vociferously who, themselves, accomplish the least, either because they are incapable or because they are unwilling to make the effort.

—

Some of us will saw wood this winter; whether or no we shall say nothing while doing it is an open question.

—

The Great American tourist might, with advantage to himself and others, learn to take his good manners with him—even though it be that he carries it as a "spare." It is distressing to be shoved off a woodlot by some irate agriculturist because the last auto party tried to milk his cow, stole his cherries and lit a fire under a foliage maple, leaving it burning when they departed, to say nothing of an assorted collection of tin cans, paper bags, crusts and olive bottles.

—

A sign in a country garage reads: "Automobiles and Fords Repaired." Evidently it is possible to classify vehicles but not always as easy to grade their occupants. The property owners along rural roads may, in the near future, be compelled to erect signs to this effect: "Civilized Autoists Pull In; Boors En Tour Keep A'Goin'."

—

Pieces rain in Europe.

RENTS, clothes, food, and gasoline go up, but fees stay down. Medical service today is the cheapest thing in the country. We need more iron in the bone—there's now too much lime. We're so easy, folks are laughing at us. Stiffen up!—"Medical Pocket Quarterly."

Leading Artieles

Eugene S. Talbot, the Stomatologist

By ALFRED S. BURDICK, A. B., M. D., Chicago, Illinois

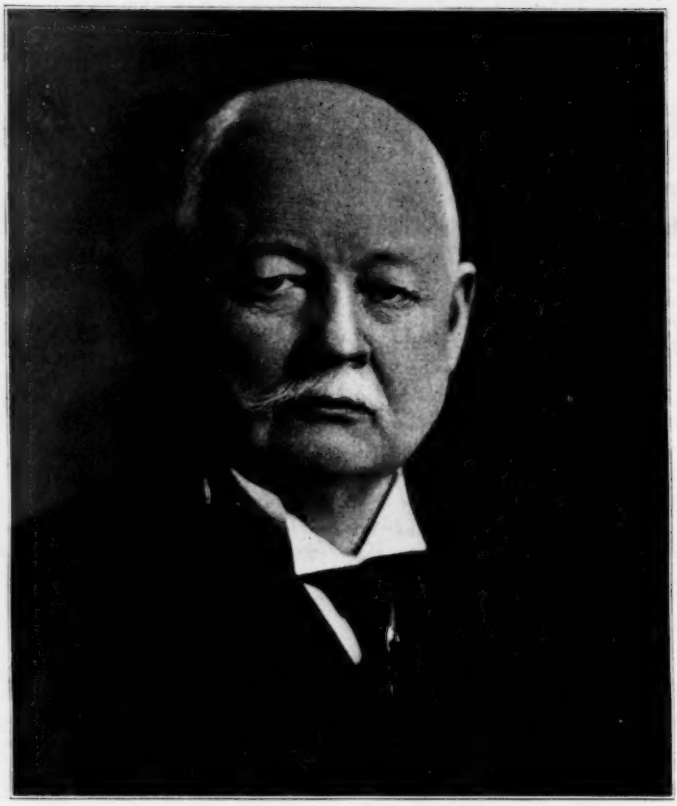
HAVING known Dr. Eugene S. Talbot, the subject of this biographical study, for many years, and having long been familiar with his work, the conviction has frequently been impressed upon me that this great student, research worker, and clinician is not appreciated as ful'y as his work merits. While Doctor Talbot is, first of all, a dentist, his studies can by no means be considered as extramedical or paramedical. Indeed, they stand in closest relation to numerous and various general ailments of the human organism that the physician is consulted about first, and that come to the dentist, for associated treatment, only secondarily. Doctor Talbot was among the first to insist forcibly and persistently that dentistry is not a mechanical trade but an essential branch of medical activity. Years ago, he maintained that dental diseases are not independent, isolated disorders but that they are closely associated with general systemic disturbances. Conversely, many maladies of a general nature, Doctor Ta'bot has taught for years, can be explained, as to their origin, with reference to existing dental irregularities and diseases.

This was a new doctrine, indeed, a new teaching that, at first, neither the dental nor the medical profession inclined to accept. It required years of study and accumulating evidence to drive the lesson home. Unfortunately, when this came about, Doctor Talbot's connection with some of these problems no longer was so immediate, and, in consequence, his name was not sufficiently associated with them. Nevertheless, it is but right that the honor and appreciation he deserves should be offered to our colleague and townsman.

Dentistry Fifty Years Ago

Doctor Talbot began the study of dentistry in a private office, in 1870. It was not necessary to have a degree in those days and there was no Illinois State Board of Dental Examiners. He soon found it necessary, however, to enter a dental college so as to acquire more and better knowledge for the successful practice of his profession. Accordingly, Talbot entered the Pennsylvania Dental College from which he graduated in 1872.

At the time of the Chicago fire (1871), he opened an office on the outskirts of the city, obtaining immediately a very lucrative practice. In a few years, however, he found, that his knowledge of pathology was quite deficient and he developed a desire to do research work. To remedy the one and satisfy the other, a better education was necessary. Having a family to support, it became the great question how to attend a medical school and retain his practice, two years being the required time to graduate and no credit in the medical school being allowed for his dental degree. After five years of figuring out the method of procedure, he found that, by taking the two years' curriculum and a spring course, he could devote two hours to office work and at the same time carry on his medical studies. The trials and hardships encountered in those two and one-half years made a lasting impression upon him. Only those who have undertaken such a task can appreciate the difficulties surrounding such and undertaking. Fortunately his ambitious,



Dr. Eugene S. Talbot.

enthusiastic and loving wife was of great assistance, encouraging and materially aiding the great enterprise. When Doctor Talbot graduated in medicine, in 1880, he broke down; but recovered after a stay in California where he had taken his family.

Doctor Talbot was well fitted to take up the specialty of diseases of the nose and throat, having done much research work upon these structures in relation to the degenerate structures of the face, nose, jaws and teeth. At that time, diseases of the nose and throat were the least-understood of all the specialties in medicine. Having located in a neighborhood where he commanded the best-possible patronage, and having a fine practice established, Doctor Talbot decided to pursue his already chosen profession rather than try to develop a new specialty.

Doctor Talbot's sojourn in California, where he was removed from all care and anxiety, gave him an opportunity to work out a plan for his future career. His experiences in both dental and medical schools and the difficulties in securing funds and the necessities of life made a marked impression upon him. His love for his profession and his enthusiasm were beyond bounds. He, therefore, resolved first, that he would devote his life to the uplifting of his specialty by helping to place it on an equal footing with the profession of medicine, thus saving time for the student and aiding him to acquire a broader view of the foundation princip'es of medicine that is so necessary to the successful practice of dentistry; second, to devote all of his spare time to research work. Having decided to make stomatology his life work, he resumed his practive with renewed vigor.

Three advanced movements were started in 1880 by Talbot, in association with the

late Dr. W. W. Allport, and with Dr. T. W. Brophy.

1. A dental college where graduates in medicine might acquire knowledge to fit them to practice dentistry.

2. The establishment of chairs of stomatology in the medical schools to teach medical students the general principles of the pathology of the mouth.

3. The establishment of a section on stomatology in the American Medical Association.

The idea of this work was, to draw the specialty of dentistry and the mother-profession of medicine closer together.

After forty years, the two last-mentioned of these plans have been quite successful; while the first, the establishment of a school to teach dentistry to medical graduates, failed completely. It was too early in the evolution of medical sciences to start such an undertaking. Doctor Talbot's strong point was, however, to undertake a few things and do them well. His ambition has always been, to attain the highest possible position in all of his undertakings and he did not spare strength, time or money to accomplish this end.

Chairs of Stomatology in Medical Schools

When the subject of establishing chairs of stomatology in the seven medical colleges in Chicago was presented to the faculties of these schools, they were all heartily in favor of the idea. At the beginning of the following year (1881), these chairs were successfully filled. Doctor Talbot himself received invitations from three medical schools, the Chicago Medical College, The Rush Medical College and The Woman's Medical School of Northwestern University. He accepted the last two appointments and continued in both positions until the schools discontinued their independent existence. The faithful and earnest work performed while Talbot was connected with these schools, has been fully recognized and acknowledged, by members of the faculties of the three medical schools referred to, in a work, "A Group of Distinguished Physicians and Surgeons", that was published in Chicago in 1904.

The Section on Stomatology in the American Medical Association

The Section on Stomatology in the American Medical Association was established in 1881, at the meeting held at Richmond, Va. It was championed by Drs. N. S. Davis of Chicago, Samuel Gross of Philadelphia, Toner of Washington, and Sayer of New York, all of whom were ex-presidents of the Association. Seven dentists with medical degrees composed the members of the section, namely, Doctors Allport of Chicago, Williams of Boston, Goodwillie of New York, Parmely of Connecticut, Hauxhurst of Michigan, Brophy and Talbot of Chicago. This section has recorded a wonderful success. In the forty years of its existence, not a paper on the mechanics of dentistry has been read at its meeting. All papers treat of histology, pathology or therapeutics of diseases of the mouth, jaws, and teeth and are of as much interest to physicians as to dentists. Many presidents, ex-presidents, and other men of national and international reputation have presented papers before this section.

This section has produced wonderful results in directing the attention of physicians to diseases of the mouth and associate parts. It has also brought the members of the sections into closer relationship. The section has accomplished two radical changes in the entire organization. (1) its example in procuring a permanent secretary for the section, when, before, a new one was appointed every year; (2) cutting down the list of papers in each section to twenty or thirty. Frequently, sixty and eighty were read in a section. The section of stomatology averages about eighteen papers. Papers presented to the section are read by 70,000 physicians in this country and abroad.

Doctor Talbot has held some offices in the Association. He was secretary of the section for thirty-three years; chairman, two years; member of the executive committee, six years; vice-president of the American Medical Association, two years; and delegate to the House of Delegates, one year, which office he is holding at the present time. It will be seen, therefore, that he has been in active service ever since the foundation of the section. In the forty years of its existence, he has been absent from its sessions only twice.

International Medical Congress

Doctor Talbot's sphere of usefulness was not confined to this country or to the American Medical Association. He is an

active member in the International Medical Congress and the Pan-American Congress. He attended the Congress held in London in 1880: was Honorary President of the X. International Congress at Berlin in 1890; Honorary President of the International Medical Congress, 1897, at Moscow. He took active part in the Medical Congresses in Rome, Budapest, Washington, and again in London. He was made corresponding member of the Budapest Royal Society of Physicians, the oldest medical society in the world. He was Honorary Secretay of the Pan-American Medical Congress, 1901, at Havana; Honorary President of the International Association of Stomatology, in 1907, at Paris, Member of the First French Congress of Stomatology, 1907, at Paris; Honorary Member of the Stomatology Society of Hungary; Corresponding Member of the Italian Stomatological Federation, 1910.

Doctor Talbot is a member of the Chicago and State medical societies and also of the Chicago Academy of Medicine, of which he has been a trustee for more than twenty years. It will be seen that he has lived his professional life among the more prominent men in this country and abroad These associations have been the incentive to higher and broader ideals in regard to his own specialty.

Dental-College Teaching

As has already been stated, Doctor Talbot learned, soon after his graduation, that the present methods of dental-college teaching are faulty. The profession has never taken interest in the improvement of methods and has left the curriculum and the manner of teaching entirely in the hands of the college faculties.

Up to within a few years, the dental colleges were mostly commercial schools. It was natural, then, that the admission of students and the methods of teaching should be kept at as low a standard as possible so as to attract students. Hence, we have an uneducated profession. To combat the dental faculties singlehanded, was no small undertaking.

Doctor Talbot resigned from all dental societies, so that he could be entirely free to do and say what he thought best for the uplifting of his profession. In 1882, he organized a propaganda of doctrines through the agency of which articles have been published in the dental journals, setting forth the shortcomings and defects in dental-college education and suggesting methods of improvement to better this specialty. He has continued this line of action to the present time. For his efforts in this direction, the University of Pennsylvania, in 1915, conferred the degree of Sc. D. upon him.

Research Work

Talbot began his research work in 1876. Three years were devoted to studying the action of the vapor of mercury upon animals. The results of this work, an article entitled "Mercury; Chemical and Physiologic Action of Fillings on the System", was published in the *Dental Cosmos,* in 1879.

Talbot devoted his entire time outside of office practice to research. He was peculiarly gifted for this work, having inherited the talent from his father who was historian for Norfolk County in the state of Massachusetts where he lived. He believed in the o'd adage, "By their fruits ye shall know them."

His desire to solve the problem of the cause of deformities of the head, face, jaws and teeth began with the theory of Imrie "Parent's Dental Guide", 1834, in which he speaks for the first time about deformed teeth being due to thumb and tongue sucking, and Tomes' view (1859) that mouth breathing was the cause of these deformities. It did not require much reasoning to discover that, if mouth breathing and thumb sucking were the cause of deformed teeth, they could not produce deformities of the head, face and jaws. This led to researches among the defective classes. It was soon found that not only were deformities of the head, face and jaws associated with deformed teeth but also that deformities of the body internal as well as external were found in degenerate individuals. This required extensive reading and desire to meet authorities on this subject in this country and Europe.

It has been one of the pleasantest features of his life to have known Drs. James G. Kiernan, of Chicago, who became his preceptor and life-long friend, C. H. Hughes, of St. Louis, C. K. Mills, of Philadelphia, E. C. Spitzka, New York, in this country, and Landon Down, Havelock Ellis, Clouston, Ireland, Shuttleworth, of

England, Féré, and Bertillon of France, Lombroso, of Italy, and Krafft-Ebing, Benedikt, and Moll, of Germany.

The professional contact and later correspondence with these men and the knowledge he gained, by research in the different countries of Europe and America, made him recognized as an authority upon the subject of degeneracy. In 1896, Havelock Ellis, editor of the "Contemporary Science Series", invited him to write a book upon 'Degeneracy, Its Causes, Signs and Results". This work was published in 1898 and is to be found in all libraries throughout the world. Still later to exploit more fully his own view concerning the etiology of degeneracies of the human body, he wrote a work, published, in 1911, by Richard G. Badger, Boston, Mass., on "Developmental Pathology; A Study in Degenerative Evolution."

His microscopical researches upon the jaws and teeth are published in books and current dental journals and are known to all dental students.

For his original researches, Kenyon College conferred the degree of LL.D. upon him (1902) and Whitman College, the degree of A. M. (1901). He also received many honors from home and foreign medical and dental societies.

As a Practitioner

In his professional life, Doctor Talbot obtained great pleasure and satisfaction in being able to practice his specialty from a medical point of view. The study of the relations of cause and effect appealed to him. His ability to treat his patients and care for their bodies as well as their mouths, as a specialist, drew his patients closer to him. This intimacy, continued through three generations, has been a source of great pleasure. The study of diseases of the mouth, jaws and teeth has always been foremost in his mind and his general knowledge of pathology has been of inestimable value to him when his patients complained of ailments in other localities than the mouth. His general knowledge of disease was of great assistance in referring his patients to proper attendants for their relief.

Talbot's forty years of practice as a physician-dentist have clearly demonstrated that every practitioner on the human body should possess an academic as well as a medical education.

Indirect Paracentesis for Abdominal Dropsy

By V. E. LAWRENCE, M. D., Ottawa, Kansas

EDITORIAL COMMENT.—The method for securing drainage of the ascitic fluid through an existing hydrocele, as outlined by Doctor Lawrence in the brief article presented herewith, is unique; at least, we have failed to find record of any similar operation being done. The method approaching this procedure most closely is recorded by Warbasse ("Surgical Treatment," 1918, Vol. 2, p. 561), according to whom P. Rosenstein accomplished drainage of ascitic fluid into the bladder by making a valved communication between the interior of the bladder and the peritoneal cavity. This, of course, necessitated opening the abdominal wall. In Doctor Lawrence's case, fortunately, the existing hydrocele made it possible to secure drainage by a far simpler procedure.

SOME six months ago, a patient, aged fifty-five years, suffering with valvular disease of the heart and with advanced interstitial nephritis, developed general dropsy. The bowels and kidneys being unable to eliminate the abdominal effusion, paracentesis became necessary.

Believing that the patient would survive some three or four months, I hesitated to puncture the abdomen because of the probable necessity of frequent repetition of the procedure.

After some consideration of the matter, although without a known precedent, I decided to puncture a large hydrocele, upon the theory that the abdominal liquid might filter through the tissues between the abdominal and scrotal cavities and thus relieve the patient of the distress of abdominal puncture, by the comparatively

painless, safe and easy tapping of the hydrocele.

This was done, with the result that, within a few hours, slightly more than 4 gallons of liquid, by measurement, flowed through the scrotal cannula, virtually all the abdominal ascites and much of the edema of the legs being removed.

A soft-rubber catheter was attached to the cannula as a means of conducting the liquid to a one-gallon receptacle.

The procedure was repeated some three weeks later, when 3 gallons were discharged. Thereafter, however, puncture of the hydrocele failed to remove the ascititic fluid and, during the last month of his life, some three months after the first scrotal paracentesis, it became necessary to puncture the abdomen.

The cause of this was doubtless due to the fact that the debris contained in the abdominal liquid so occluded the tissues as to prevent further filtration into the scrotal cavity.

It should be stated that the patient had no scrotal or other form of the hernia. The former would form a canal between the abdominal and scrotal cavities.

Through correspondence with reliable surgical authority I am informed that, so far as known, there is no other similar case on record.

On the Extraction of Projectiles from the Thoracic Cavity, Particularly the Mediastinum

By RENÉ LE FORT, M. D., Lille, France

Professor on the Faculty of the Medical School at Lille

EDITORIAL COMMENT.—Professor Le Fort is a prominent French surgeon and has merited the approval and thanks of his colleagues, especially through the splendid work that he did during and since the war in the extraction of foreign bodies, more especially projectiles and fragments of shells from the thoracic cavity. In heart surgery, also, Professor Le Fort has accomplished splendid work. The article that we present to the readers of CLINICAL MEDICINE *herewith is the more timely, as the author, who is traveling in the United States, at the present time, did us the honor to call on us, recently. We were happy to make the personal acquaintance of our distinguished contributor.*

IN this communication, I shall leave aside everything that deals with the operative indications and also everything relative to the extraction of recent projectiles or of those accompanied by fistulas.

The best method of extraction is that giving the maximum of operative safety while producing the minimum of disturbance. A method may not be employed in an entirely uniform manner; nevertheless, it is amenable to certain general rules that must be observed, no matter what method be utilized.

Every operation for the removal of intrathoracic projectiles must be preceded by a complete skiagraphic study undertaken by the surgeon with the assistance of radiographs. The operation must be safeguarded by the control of the screen. After having employed radioscopy in all its forms, I have come to the following conclusion: The radioscopic control may with advantage be carried out by the surgeon himself for simple operations; but, major interventions in dangerous regions demand that the surgeon should operate with natural light and that the radioscopic control must be undertaken by means of a fluoroscope supplied with a hood.

In order to avoid secondary deformities of the thorax, I have completely given up resection of ribs and especially cartilages in all operations that are done anteriorly or laterally. The resected ribs and cartilages are not regenerated, or they are replaced by irregular bony plates that are often uncomfortable. These new-forma-

tions may sometimes be observed after resection of cartilage.

According to the gravity and the importance of the intervention, one may thus group the methods of selection for the extraction of projectiles.

Methods of Operation

1. The extraction by means of forceps under the screen is suitable for small and medium-sized projectiles from the pulmonary parenchyma, distant from the hilum region and the mediastinum. This procedure necessitates an apprenticeship. The seizing of the projectile is sometimes rendered difficult when the free pleura or a hard shell formed around the projectile is pushed by the forceps and this thrusts the projectile further down; however, one should avoid pushing it up towards the hilum. In the course of the intervention, the opacity of an intrapulmonary hematoma produced by the manipulation may become a cause of embarrassment for the further search under the screen, especially if the vertebræ, the liver and the heart already hide the fragment. The postoperative symptoms are remarkably mild. For more than two years, I have utilized this method frequently and without a single accident. My two latest patients took a walk four days after the operation.

2. A certain number of voluminous foreign bodies which are irregular, or have sharp, fish-hook like points in those regions of the pulmonary parenchyma that are not very dangerous, may be removed by the technic according to Marion; that is to say, the extraction through the right pleura, after fixation of the lung to the chest wall, by means of several sutures. The finger is introduced to search for the foreign body through the pulmonary parenchyma. After its localization, this is confirmed by means of radiographic investigation. The method is an excellent one. The postoperative phenomena are mild; somewhat less mild, though, than those after the extraction with forceps under the screen. Still, this method seems to me to be contraindicated in the dangerous regions when it is well to see what one does.

In one case, I encountered between the finger and the fragment a large vessel which the restricted passage did not permit me to avoid, and I was forced to resort to another method. If, theoretically, Marion's method does not give rise to pneumothorax, still, in certain subjects, the pulmonary opening is enlarged under the influence of the atmospheric pressure to such a degree as to constitute sometimes a sufficiently large cavity, a kind of intrapulmonary pneumothorax which permits the projectile to slip away from the wall. I

Dr. René Le Fort.

have employed the method either by following the technic of Marion or by producing, instead of the rib resection, a temporary displacement of the rib, after loosening the parietel pleura and by simply cutting through the costal cartilage. I did not tampon the wound.

3. The projectiles in the dangerous regions, namely, hilum, pedicle, mediastinum, require operation through large openings.

A large transpleural opening is here required. The pneumothorax is perfectly tolerated by the patients during the intervention. The postoperative phenomena are

less mild, however, than after extraction by the methods aforementioned.

The best way is, without a doubt, the anterior or anterolateral transpleural one. Resection of the ribs is useless and dangerous. (Fig. 1 and 2.)

The incision in an intercostal space and also through one or two adjacent costal cartilages provides considerable light. The procedure permits an almost indefinite enlargement of the opening by section of the adjoining costal cartilages. It also makes it possible to make the incision in the form of an osteoclastic flap.[1] This is the ideal

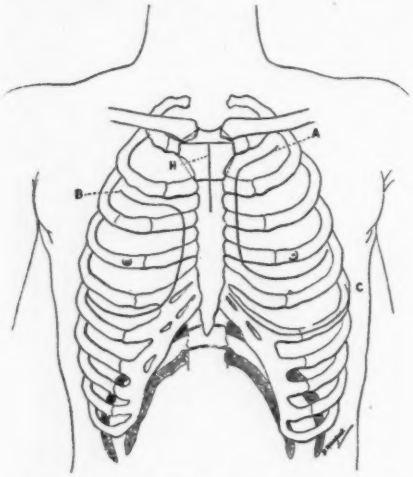


Fig. 1. Incisions used by the author to open the mediastinum.

A. Incision of a costal osteoclastic flap, including the right 2nd, 3rd and 4th ribs.

B. Costal flap including the left 3rd, 4th and 5th ribs.

C. Wide resection of the left 6th rib.

H. Resection of the three lower fourths of the manubrium sterni. The skin incision is marked in the median line.

method for the hilum region and even for a good portion of the mediastinum, especially the interior.

4. The difficult mediastinal extractions must be carried through the anterior way. They are most easily carried out through the prolonged osteoclastic-flap incision, according to Delorme.

I have minutely described and modified the technic in various publications under the name of improved costal osteoclastic-flap operation. As a matter of fact, I avoid almost always fracture of the ribs, even

[1] This is a double flap, in the manner of French double shutters. The French term is *volet*.

green-stick fracture, by prolonging outward the arms of the U of the flap. This is the technic that affords abundance of light. It is to be reserved for complicated cases and not, as has often been imputed to me, for extractions in the hilum region. These are so much simpler, as the hilum (if one were to rely on the reading of observations of many surgeons) extended, since the war, to pulmonary regions with which it did not seem to have but remote anatomical relations before then. The large flap incisions are well tolerated in the course of the operation. Certain patients

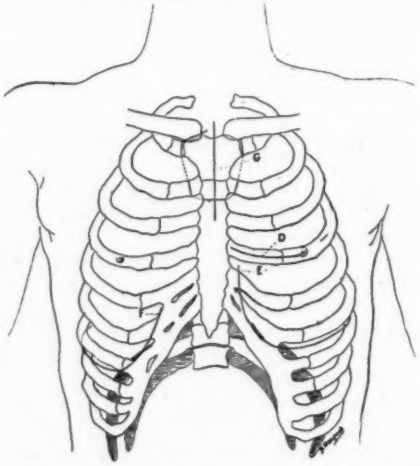


Fig. 2. D. Incision for the resection of a part of the 4th rib with its costal cartilage.

E. Incision into the 6th intercostal space and section of the 6th and 5th costal cartilages.

F. Incision into the 7th intercostal space and section of the 7th and 6th costal cartilages.

G. Depression of a sternal flap around the left sterno-clavicular articulation; section of the right sterno-clavicular articulation of the 1st and 2nd right and left costal cartilages, and of the sternum between the 2nd and 3rd costal cartilages. The vertical median line indicates the skin incision.

show slight shock during the first two days.

5. Finally, certain regions are of particularly difficult access, even for the aforementioned methods.

I have described, in the *Presse Médicale*, the sternocleido-costal flap which permits to raise temporarily the clavicle and the first rib without lasting mutilation and without fracturing them. This method permits access to the cervicomediastinal crossing.

In a memoire to the *Revue de Chirurgie* and in a recent book, I described certain

other exceptional methods based upon the same principles.

Recently, during the extraction of a difficult mediastinal projectile, after having done a large external flap with hinge, and having found that a voluminous projectile was placed very deeply between the descending aorta and the inferior portion of the superior vena cava, just above the right auricle (in order to remove the fragment and to be in a position to guard against a possible hemorrhage) I made on the sternum two transversal incisions with the saw, the one above, the other below, and then I put the sternum in a slanting position, for the time being. The mediastinum was approachable as easily as the anterior aspect of the thigh. The extraction took place without hemorrhage; recovery was

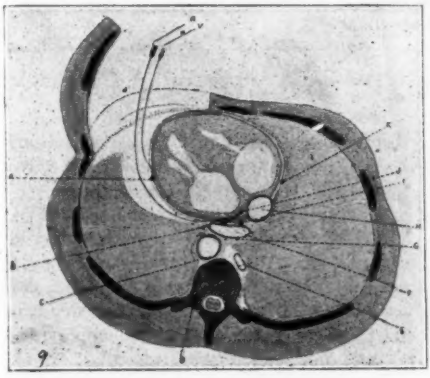


Fig. 3. Diagram of the thorax showing the path followed for removing two projectiles from the posterior cardiac region, that were difficult of extraction.

R, Path followed for searching for a German bullet (J) enclosed in the posterior wall of the right ventricle in a patient with pericardial adhesion. The mediastinal pleura has been crushed against the anterior portion of the pulmonary ligament. The pericardial sack was loosened in its posterior wall, then incised in front of the esophagus (F). The two serous pericardial layers were cut through and the myocardium separated until the projectile was reached.

V, Path followed in searching for a piece of shrapnel (J) which was mobile and escaped behind the pericardium. As the piece could not be seized after pushing the mediastinal pleura against the anterior portion of the pulmonary ligament and opening the posterior wall of the pericardium, the latter was incised in front of the left phrenic nerve (A) and in transpericardial direction the ball was seen behind the pericardium, having moved from the region of the vena cava (H) whence it had slidden against the esophagus; it was fixed at this point by finger pressure and extracted through a transpericardial incision into the posterior pericardium.

Summary: Transpericardial entrance; B and G, pneumogastric nerves; C, aorta; D, vertebrae; E, azygos; K, right phrenic nerve.

quite uneventful. As a matter of principle, drainage of the pleura must always be forbidden. Experience has shown that post-operative phenomena of all these interventions are relatively benign.

Operative Results

Recently, I presented to the Academy of Medicine the result of the first one hundred operations that I undertook for the extraction of projectiles enclosed in the mediastinum or its immediate surroundings.

These one hundred operations were practiced upon ninety-seven patients for the

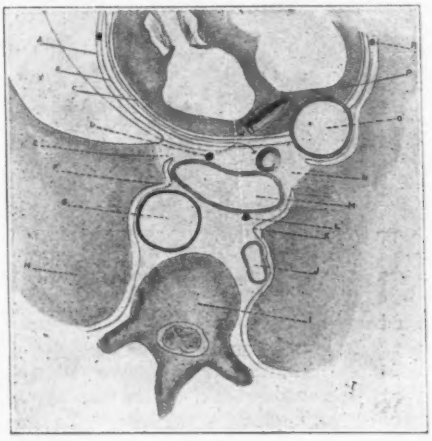


Fig. 4. Enlargement of the central portion of Fig. 3. A, pericardial pleura; B, pericardium; C, visceral layer of the pericardium; D, left pneumogastric; E, pulmonary ligament; F, pleura; G, aorta; H, lung; I, vertebra; J, azygos; K, pleura; L, right pneumogastric; M, the esophagus greatly enlarged; N, pulmonary ligament; O, vena cava; P, heart; R, right phrenic nerve.

extraction of one hundred and six projectiles. The results were as follows: The operative mortality was 7 percent. From 8.7 percent. for the years 1916 and 1917, it fell to nil (0.0 percent) in 1918 and 1919. The majority of those operated on in 1917, and especially in 1918 and 1919, constituted, however, bad cases that certain colleagues were kind enough to entrust to me upon my request. (Fig. 5.)

Out of seven cases, five were extractions from the region of the pulmonary pedicle. This proportion is considerable. The pedicle is in fact an extremely limited, extrapulmonary region, and must not be confounded with the region of the lung called the hilum region by surgeons, a region that never has given me any trouble.

Of the seven fatal cases, five took place as follows: one in November, one in De-

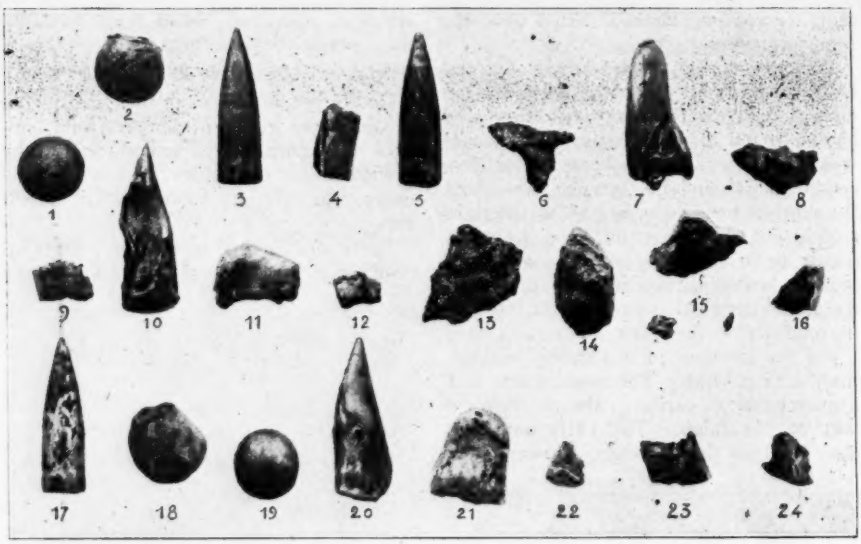


Fig. 5. This figure shows, in slight reduction, several of the mediastinal (1 to 22) and paramediastinal (23 to 24) projectiles extracted through anterior incision.

cember, two in January and one in February. I do not believe that this high winter mortality is coincidence. None of the patients operated on died during the operation or during the twenty-four hours following it.

In four of these fatal cases, a bacteriological examination of the projectiles was made. Three times, it showed a very high degree of infection.

I wish to note the ordinary benignity of cardiac intervention. Out of ten extractions of foreign bodies from the heart, I was successful nine times, among which there was once the extraction of a fragment from the cavity of the left ventricle. The patient, who died, had submitted to the extraction of a fragment of shell from the left auricle. The postoperative phenomena were very mild during the first three days. Death took place on the fourth day.

In the course of the first interventions practiced in the mediastinal region, failures were not exceptional. In 1916, I was successful in only 77.1 percent of operations; in 1917, in 86 percent, and in 1918 and 1919, I had 100 percent of successes.

The progressive amelioration of the results had two causes. First, the more or less complete abandonment of narrow openings and especially the posterior incision. Second, the perfection of technic employed and, above all, the systematic employment of radioscopy during operation.

The operations were done in all regions of the mediastinum and its immediate vicinity. The cavities and walls of the heart and pericardium, the aortic region, region of the vena cava, that of the esophagus, the pedicles, the hilum, and ligaments of the lung, the mediastinal pleura, and so forth.

Since my last communication to the Academy of Medicine, I had occasion to extract several projectiles from the mediastinal region, notably, removing, in the same subject, multiple fragments from the pericardium and the lungs. All projectiles were removed and the patients recovered.

The Phosphatic Index More Fully Described

By J. HENRY DOWD, M. D., Buffalo, New York

EDITORIAL COMMENT.—Doctor Dowd's article on the phosphatic index has aroused an unusual degree of interest—showing that the general practitioner throughout the country is keenly alive to everything new that promises to aid him in the recognition and the treatment of disease conditions. In the article that we are privileged to publish in this issue of CLINICAL MEDICINE, *Doctor Dowd has presented much additional information. We hope to secure the results of observation on the part of other physicians concerning the phosphatic index, and invite such reports as soon as sufficient time has elapsed for physicians to formulate definite conclusions regarding the practical value of this reaction.*

"THE phosphatic index, as described by you in the August number of CLINICAL MEDICINE, Chicago, has given me better assistance than your article claimed for it, judging by the results in some of the cases treated so far. Could you make it a little clearer as to a precipitate that will not sink, even in half an hour, and which looks like snowflakes in the solution? Is it plus or minus? Also, what is the explanation of new crystals?"

The foregoing quotation is from one of the scores of letters I have received regarding my recent article in CLINICAL MEDICINE (Aug., p. 519). From this, but two conclusions can be drawn: physicians are interested in things that tend to make possible relief to suffering humanity, even though they do not necessitate expensive apparatus and the knowledge of an expert to use them. Also, although I tried my best to make things understandable, it is very clear I did not do so.

A few words may be offered in a way of explanation. Medicine never can be placed on a positively scientific basis as far as uniform results are to be obtained. It is not the physician that must be blamed for this, but the individual, for, all people are not born alike. It used to be called idiosyncrasy; today, it has a new name; anaphylaxis.

We find certain individuals born with peculiar strains that make them peculiar patients when they get sick; in other words, there is a great deal of truth in the old statement, "what will cure one will kill another."

Difficulty in Diagnosis

Seeing brings conviction. If we could make an operative exploration of all patients where we can not see the trouble and its cause, there would be little difficulty in arriving at a diagnosis. But, we can not do so. Therefore, we must guess, being guided by a supposedly previous similar train of symptoms. Deny it if you please; still, the words of a prominent layman, uttered some time ago, are only too true, "a medical diagnosis even by the most expert is little more than a good guess."

Physicians all agree on one point: On the correct diagnosis of any case of illness depends its successful treatment. The surgeon can quickly remove the bullet; the x-ray has shown him the exact location where to cut. The physician can conscientiously give antidiphtheritic serum; the microscope has proved the condition to be diphtheria by the finding of the Klebs-Löffler bacillus. The oculist says, your dimness of vision is due to cataract; he removes it, orders proper glasses, and your vision is restored. These examples prove one thing: To see the disease and to find the cause, when possible, means a correct diagnosis, and, where the cause can be removed, a permanent recovery.

The examples cited are of pathological conditions; conditions where there is an underlying anatomical change to account for them. But, what of those troubles where there is no physical change; conditions that are called functional? These are the conditions that baffle even the expert, and in them we may find the symptoms of the same "disease" to vary in different individuals. Why such may be possible, seems quite clear; the ailments spring from a center which is practically under control of the will, or mind.

It is this class of cases that so often fail to respond to treatment, even though the

diagnosis be correctly made and appropriate measures used for their relief. Take a step further and what do we find? In a purely organic disease, one in which there is no doubt of the diagnosis and we are reasonably certain that appropriate treatment is being applied, and, yet, results do not follow as expected.

The doctor becomes discouraged, so also does the patient. If no diagnosis has been made, the patient will be subjected to group consideration; in case of a reasonable certainty as to diagnosis, it means a consultation.

It may be a very crude analogy to offer: however, let us compare it to a farmer and his field. He thoroughly plows and works the ground; he uses the best seeding obtainable, yet, his crop is very poor and will continue to be poor until he ascertains the true cause, which, of course, in practically every case, means a want of soil nutriment.

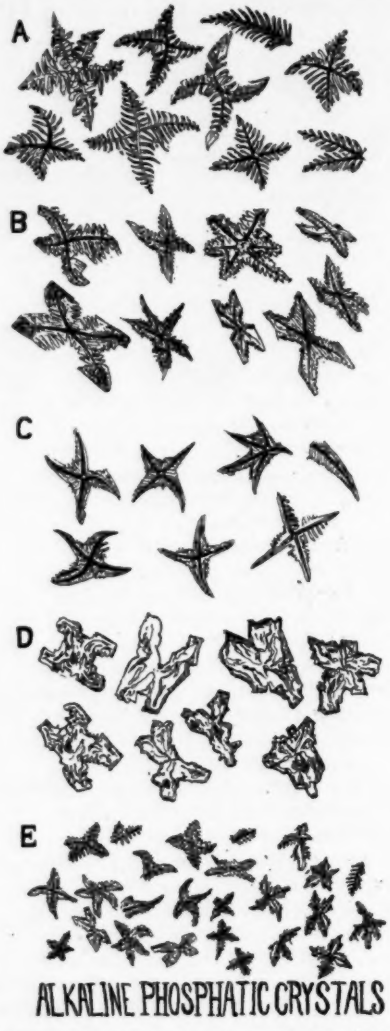
We are constantly reading about the internal secretions and the important part they play in the life of the individual. Some go so far as to maintain that they give the vital spark of life and that, if they are diminished in quantity, the spark burns less brightly or may go out. There is no doubt of their value. These substances are the products of glands that must secrete, and, to do so, these glands must be supplied with motion.

Summing up the foregoing, but one conclusion can be arrived at: Sensation, motion and resisting power are furnished to all tissues and glands through the nerves which, in turn, are supplied from the central station, or brain.

The Importance of Nerve Nutrition

The theory of nerve metabolism is, or should be, quite clear. We know that hemoglobin is an absolute necessity for the red blood cells; that, without calcium in practically normal amounts, bones would suffer; protein must be furnished to the muscles. These substances are, and must be, considered as the food of these various tissues. Physiology teaches that phosphorus, lecithin and nuclein are the nourishment, or food, of the nerve cells.

Phosphorus, lecithin and nuclein are taken from the food we eat, and by a process of digestion and assimilation are conveyed to the cerebral cells where they are used as a nutriment. As in all other systemic processes, after this nutriment has been thoroughly utilized, the residue, or what may remain, is cast off as waste; we find



ALKALINE PHOSPHATIC CRYSTALS

it in the urine in the form of phosphoric acid or of phosphates.

Phosphates in the Urine

Phosphates found in the urine may be divided into two classes: the earthy, representing the waste of calcium and magnesium, and the alkaline namely sodium and potassium phosphate. The earthy phosphates are the variety found in freshly-passed urine or may appear on boiling; they are increased in diseases of the bone,

such as, rickets, osteomalacia and diffuse periostitis.

The alkaline phosphates are found only on precipitation, occurring as crystals; fern-shaped in character, if normal. They are increased or decreased in quantity according to the action of the neurones and the amount of nerve-cell nutrition present; in other words, *the alkaline phosphates indicate the state of nerve metabolism.*

The alkaline phosphatic crystals fall in the phosphatometer according to their weight. Five different forms may be described. If they are of a practically normal specific gravity, they will fall rapidly. On the other hand, if they are of a light specific gravity, showing a want of nutrition, they will fall very slowly, at times not at all. (See figure on p. 668).

A. Normal crystals. Note formation of fronds, also density of the crystals. With the phosphatometer registering NP, these crystals, using the blood as an analogy, would mean a normal number of red cells with a normal amount of hemoglobin.

B. Note saw-like edges of crystals with apparent want of density. These show a want of nerve-cell nutrition; a deficient hemoglobin, using the blood as a comparison.

C. Note disappearance of feathery sides. This is most characteristic of pregnancy from the third week to the third month. ("Year Book," 1906).

D. Amorphous crystals. Excluding the use of alcohol, tobacco in excess, drugs, as morphine, cocaine and the like; if these crystals are found constantly, one may fairly assume that nerve-cell degeneration is in progress. (Six cases out of eight in my practice have ended in insanity; the crystals were found from eight to twelve months prior to their commitment).

E. Note small size, apparently one-third the size of A, some having the shape of a Y. Most characteristic of hysteria or marked nerve-cell irritation.

The index may be considered as normal when the precipitate falls to NP, in a practically solid mass, in ten minutes. Below NP, or where the precipitate falls but part way and is light and fluffy, the index must be considered as minus.

Illustrative Case Histories

The following brief reports of cases illustrate what properly-applied medication will do in the different varieties of medical practice; the phosphatometer was used as an aid in diagnosis, and it also showed the treatment necessary.

Mrs. S., age 27, married, but never pregnant. In consultation, the following history was given: For three months or more, pain throughout entire body, was obliged to spend much time in bed; could not dress herself. An index was made at once showing 95 percent minus; crystals A, very small; the urine was alkaline. A diagnosis of general neuritis was made and a phosphorus mixture ordered. Almost entire relief of pain on the fifth day; could dress herself at the end of ten days; in four weeks, had gained twelve pounds; was entirely free of pain. Menses failed to appear in the second month; pregnancy; a girl arrived at full time. Four years afterward, no return of pain.

Mrs. A., age 40, reported by Dr. Wm. Preiss. Very severe facial neuralgia. X-ray, of course, showed ulcerated tooth roots; seven teeth extracted but without relief from pain. Blood examination happened to be reported as negative. The patient being referred to Doctor Preiss, an index was made which was 80 percent minus. The phosphorus mixture was ordered. 30 drops in milk, half an hour after meals. No pain of any account on the fourth day, entirely relieved at the end of the tenth; had not returned in a year afterward; it cost this lady $90.00 to replace the extracted teeth, and that before the war.

Mrs. G., age 40. Brachial neuritis, very severe at times. Five different doctors, five different modes of treatment. As she lived some distance form Buffalo, the urine was sent here for examination. No pathological condition was found; no excess of uric acid; the index was 150 percent plus, solid. Bromide of gold and arsenic was ordered, 10 drops in water, three times a day, gradually increased to 20. No improvement for about two weeks after which pain commenced to subside, entirely vanishing in another week. No return of pain at the end of five years.

Mr. J., Brachial neuritis three months standing, several modes of treatment productive of no benefit whatsoever. No history of injury could be found; there seemed to be no pathological condition of any sort present. Phosphatic index 70 percent minus, crystals B, no excess of uric acid. A mixture of phosphorus, nux and cannabis indica, three times daily in milk, gave relief in forty-eight hours; there was no pain whatsoever at the end of the fourth day, and this never returned.

Summing up as to neuralgia and neuritis, it may be safely said that 80 percent of the cases are due to nerve-cell starvation and will have a minus index: 10 percent to nerve-cell irritation showing a plus index: and 10 percent to other causes, such as, pressure, uric acid excess and, occasionally, the teeth.

Surgical Cases

J. A., a hospital case under the charge of Dr. A. E. Smith, who had operated for tumor of the shoulder. About the end of

the tenth day, the wound appeared stationary (healing was progressing by granulation); granulations could not be stimulated by any means. Taking the index was suggested, this being found 75 percent minus. The phosphorus mixture was ordered. There was an apparent resumption of granulation formation at once; in ten days, the wound was fully closed over; in twenty days, the patient had gained twelve pounds.

Gynecological Cases

Mrs. P., in hospital three weeks being subjected to group diagnosis. Pelvic pain; profuse leukorrhea with erosion at cervix; extremely nervous, headache, insomnia, and eyes giving a great deal of trouble. Scrapings from cervix revealed nothing abnormal; Wassermann negative; x-ray of teeth and abdominal viscera negative (probably a bad plate); no trouble in tonsils that could be discovered. Urine and feces, on examination, gave no information.

Treating this lady's husband for a nervous condition, I suggested that her index be taken. This was found very low with all crystals showing nerve-cell starvation. She was placed on nerve-cell food at once, in connection with fluid-extract of valerian to act as a temporary sedative.

I have never seen this lady, so, I give you her husband's words, some three weeks afterwards: "My wife is entirely well, no pain, no leukorrhea, sleeps fine; she feels as well as he has in years." It was simply a case of neurasthenia due to nerve-cell starvation.

Nose, Throat and Ear Cases

The case, that of my own daughter, might be cited, especially to show how we neglect our own. She had suffered from otitis media, with a slight discharge from the right ear, off and on for a long time. Constant treatment by Dr. F. relieved the condition only temporarily; as surely as there was some hard work in school, the ear would discharge. I was asked to make an index (a thing I had never done) as a want of tissue tone might account for the condition. I found it 60 percent minus; crystals B and very small. Dr. F. immediately placed her on the phosphorus mixture already alluded to, with the result that, in ten days, the discharge entirely stopped. She has had no return of it in three years.

Mr. W., of New York, referred to me by Professor Cott, of the University of B. He had suffered for over a year from trouble in the frontal sinus, which had been opened but persisted in constantly discharging. Washing out the cavity would control the discharge for a few days, but, invariably, it would recur as bad as ever. The constant discharge, together with worry over the condition, had made of the man almost a physical wreck. Dyspepsia, constipation, insomnia, headache, no appetite—the fact is, he had many symptoms of melancholia.

The urine was found alkaline; no albumin, sugar or casts; only a slight excess of indican. The index was 90 percent minus, with crystals fast approaching D. I advised valerian, resin podophyllin, with my phosphorus mixture.

Having never seen the patient since, I must depend on Doctor Cott's report to me. He says, "Greatly improved in a week's time, all physical symptoms gone; discharge practically ceased."

Eye Cases

Scores of cases might be reported where the eye is suspected of being the cause of headache, and where general systematic conditions exist, such as, indefinite pain, stomach trouble, and the like; also, many inflammatory conditions of the eye itself, as, blepharitis marginalis, iritis, phlyctenular ulcers, and so on, all of which had been seen and treated by eminent specialists, yet without good results following.

Either in consultation or by the oculist himself, an index was made that showed the condition to be nerve-cell involvement with an index either low or plus. In practically every case, by prescribing according to the readings, results and, indeed, entire relief became manifest in a very few days.

Regarding headache and pains that are supposed to originate from the eyes; in about 75 percent of the cases, it will be found that the cause is of systemic origin; 60 percent are due to nerve-cell starvation and 15 percent to nerve-cell irritation or hypersensibility.

A safe rule to follow regarding practically all headache cases and, for that matter, inflammatory conditions that do not respond quickly to appropriate measures, is, to take the phosphatic index before referring the patients to the specialist. In a goodly number of cases, relief will be evident at once. When there is no response to medication, the eyes may be looked upon as the true cause and with a reasonable amount of assurance that glasses give prompt relief.

The Technic of The Phosphatic Index

In view of the numerous letters that I have received on the subject of my article, I submit the following details which will answer many of the questions asked:

The formula[1] of the test solution is as follows: Ammonium chloride, water of ammonia (commercial 10 percent), magnesium sulphate, of each, 1 ounce; water, 8 ounces. After dissolving, this solution should be filtered. It is well to cover the filter while doing so, to avoid evaporation of the am-

[1] I am informed that 4 ounces of this test solution is sent out with each phosphatometer which is handled by The Richardson Company, Buffalo, N. Y. Phosphatometers are sold for $3.00.

monia. The solution is very simple to make and can be kept indefinitely although a slight precipitate may form especially if it gets very cold. This, though, does not interfere with its use.

In making examinations, always use the second urine passed in the morning; preferably, about ten or eleven o'clock. Fill the phosphatometer with urine to the mark "U" and add of the solution from "U" to "S". Shake thoroughly and set aside for ten minutes; allowing twenty minutes if you are to examine the crystals for pregnancy.

The solution should turn milky at once and the precipitate commence to sink. If

The Phosphatometer.

it reaches NP in ten minutes and is in a reasonably solid mass, no matter what may be the condition or symptoms, the nervous system as a factor is not to be considered. When the precipitate will not sink, is light and fluffy, or goes below NP, it indicates a want of nerve-cell nutrition. Then, no matter what the condition may be or what procedure is being used, if nerve-cell food is not administered, little or no progress toward recovery can be expected until the cells are supplied with their natural nutrition, that is, phosphorus, lecithin and nuclein, the food for the nervous system.

No matter what the condition may be—headache, dyspepsia, gas formation, leukorrhea, fatigue, all being conditions that plainly show a want of tone in the tissues, nerve-cell nutrition must be supplied to bring about resolution. In all these conditions, a minus, or low, index will be evident.

Pain is the condition *par excellence* for the use of the phosphatometer. Nerves can not speak; their word for hunger is pain. In fully eighty percent of pain, especially of an indefinite character, the index will be found to be minus. Prescribing for pain, as indicated by the reading of the phosphatometer, will be followed by permanent relief inside of two to three days.

The Phosphorus Mixture

The preparation that I prescribe consists of phosphorus, nux vomica and cannabis indica and is a standard remedy. It can be obtained at any drug store under the name of Compound Phosphate Mixture, Dowd. The dose is 30 drops in milk, half an hour after meals. To this mixture may be added fluid-extract of valerian, for its sedative effect, resin of podophyllum for constipation, or glycerin to make the dose one drachm, but, *never water*. Any preparation of phosphorus undergoes oxidization inside of forty-eight hours unless held in solution by absolute alcohol.

When the precipitate remains in a solid, compact mass above NP, it indicates nerve-cell irritation, or hypersensibility, and is the condition in nerve troubles of long standing; especially, high blood pressure. If the case is acute, of only a few days to two weeks' standing, elixir of the valerianate of ammonia with the bromide of sodium will act promptly. Where the condition is chronic, of long standing, especially as is found in high blood pressure, the bromide of gold and arsenic is the remedy to be used. In these conditions, the results may be a little slow; two weeks may intervene before much effect is shown, but, at about this time, conditions will change for the better; the blood pressure will fall and a perfect result may be looked for in the course of four or five weeks. Dieting is unnecessary in high blood pressure. Bromide of gold and arsenic will be found your most valuable adjunct in diabetes; it will entirely relieve the functional form of this disease; bring about a normal state and, if it does not entirely relieve the organic condition, it will prolong the patient's life for years in almost perfect ease. Of course, marked restriction of the diet is necessary for the first week. After this, a reasonable amount of carbohydrates can be given; in the functional variety, a full diet.

The bromide mixture is one made especially for my use by the chemists of The Richardson Company, Buffalo, New York. They do not handle it as the phosphatometer and phosphorus mixture, but might supply a doctor direct if requested.

Corn Oil as a Preventive of Poisonous Cooking

By EDWIN F. BOWERS, New York City

IF there is any one fact, in connection with food preparation, that obtrudes itself into the objective consciousness more whole-heartedly than most other facts, it is that many foods, as ordinarily fried in lard or grease, have homicidal tendencies. Occasionally, their victim escapes, principally because he is both tough and lucky.

Not, however, before he is pretty badly crippled from the absorption of indol, skatol, indoxyl, and other putrefactive alkaloids produced by the decomposition of protein, rendered more or less indigestible by being soaked in fat and then "slow-fried."

In foods fried in grease or lard, the cooking temperature is automatically regulated, from the fact that animal fats burn or smoke at relatively low temperatures. Hence, if a degree of heat sufficient to instantly sear over the surfaces of the food and seal in the juices and flavors of the meat is employed, the acrid fumes of the burning fatty acids tend to drive the cook out of the kitchen.

Also, there is, in this relatively low-burning point of grease and lard, a tendency to develop acrolein, or acrylic aldehyde, which results from the decomposition of the fat into products other than fatty acids and glycerine. As every physician knows, this acrolein is highly irritating to the gastric and intestinal mucous membrane, preventing the secretion of digestive juices and interfering with the orderly processes of digestion.

So, perhaps the chief reason why fried foods are generally interdicted is because, as ordinarily prepared, they *should* be interdicted.

Corn Oil Not Injurious

That this does not follow with all fats, however, is proved by ample clinical experience with certain vegetable oils, notably an oil derived from corn, or maize. This corn oil can be heated to a temperature of 600 degrees or more without burning. It has a smoking point around 440° Fahrenheit, far above any temperature necessary for successful cooking.

In fact, the degree of heat readily utilizable in cooking with corn oil is quite sufficient to "crust over" the surfaces of the food, retaining flavors and odors, and so cooking the surfaces of the food that the fat is not absorbed into the cell structure to anything like the extent it is with butter, lard or other fats that burn at a much lower temperature.

Also, having such a high smoking point (decomposition point), corn oil does not so readily produce acrolein. Consequently, it does not produce the conditions caused by acrylic aldehyde.

Maize oil is readily split by the intestinal enzyme, lipase, into glycerine and fatty acid, and is freely absorbed as food.

Now, grease, lard, tallow and other animal fats,—as McCollum and other observers have pointed out,—are either deficient or else totally lacking in vitamines, colloids and other activators of nutrition. Thus, as everyone now knows, their high caloric value is not of the slightest avail in preventing the development of pellagra, polyneuritis, and similar grave disorders of metabolism.

Other Advantages of Corn Oil

Corn oil, on the other hand, carries from one to one and half percent of lecithin with 25% of ether-soluble phosphorus computed to lecithin, together with a variable amount of phytin, glycerophosphates and nucleins,—all of which have a marked effect in promoting nutrition and in helping to conserve nerve integrity.

Indeed, Dr. Z. T. Baldwin, who has achieved a notable success in the treatment of tuberculosis and wasting diseases of germ origin, by the intravenous injections of guaiacol and salycilic acid, has found an emulsion of corn oil to be of immense value in the treatment of wasting diseases, inasmuch as it is more quickly absorbed than any other fat. Baldwin contends that patients who are given corn oil gain in

weight more rapidly than they do upon any other form of oil.

The corn oil never produces the gastric disturbances and eructations that follow so generally the use of codliver oil or many other fats, which develop these conditions when given in large doses, or for any considerable length of time.

Dr. John Ritter, in charge of the tuberculosis dispensary of the Rush Medical School, Chicago, has also written a hearty endorsement of the use of maize oil in his clinic, showing it to be a highly nutritious and readily assimilated oil, yielding much better results than the hydrocarbons heretofore used.

In brief, it would seem excellent practice to recommend to those who are undernourished or who suffer from malnutrition, or from any wasting disease, to take a tablespoonful or two of maize oil several times a day—followed preferably by 5 or 10 drops of dilute hydrochloric acid, in order to favor the conversion of lime salts in the system, a factor highly to be desired in all wasting disorders.

The oil can be used liberally in salads, where it is not only highly palatable, but also adds materially to the nutritive value of the meal. The best available preparation of it is marketed under the tradename Mazola.

From all the data, and a wealth of experience, it is a fair assumption that corn oil not only has unique value as a nutritive agent, but that its use in cooking will do much to reduce the disability and mortality heretofore charged against the frying pan and the bake oven. It is far superior to lard and butter.

Essentials and Non-Essentials in Vaccine Therapy

By G. H. SHERMAN, M. D., Detroit, Michigan

EDITORIAL COMMENT.—Doctor Sherman makes the point, and adduces supporting evidence from so high an authority as Sir Almroth Wright, that absolutely specific, that is, homologous bacterins are not essential for the production of an immunizing response. This is, of course, approaching the theories based upon the socalled non-specific-protein reactions and constitutes a very important problem.

GREAT stress has been placed on some aspects of vaccine therapy that are not essential while some most-essential features have been disregarded. Although vaccine therapy is primarily a specific method of treatment, yet, some very important non-specific actions must be utilized to obtain the best therapeutic results.

On account of its being a specific method of treatment, many advocates of vaccine therapy insist that an absolute bacterial diagnosis, obtained by careful bacterial examination, is necessary before vaccine treatment is instituted. This, though, is non-essential, in many cases. While, in the treatment of a given case, it is of advantage to know what the infecting organisms are, yet, the primary purpose in therapeutics should always be, to utilize our therapeutic agents to the best advantage at the most opportune time. Since early immunizing treatment is very important, especially in extensive acute infections, immediate therapeutic immunization is more essential than a positive bacterial diagnosis, as this would cause from one to three day's delay. Familiarity with the infecting organisms responsible for different kinds of infections will serve as a sufficient guide to make a diagnosis in most instances. Indeed, infections produced by the various infecting organisms present quite characteristic clinical symptoms.

While it is essential that the vaccine should contain organisms like the ones implicated in the infection, it is not essential that only such organisms be employed; additional organisms may also be contained in the vaccine without, in the least, interfering with the immunizing influences of those portions of the vaccine that correspond to the organisms responsible for the

infection. That immunizing responses develop from all the organisms contained in a mixed vaccine, was conclusively demonstrated by Professor Castellani, of the University of Naples, as reported in *The Lancet* (Nov. 27, 1915), where he showed that agglutinins and other immune bodies were developed in response to all the germs injected, and recommended various combined vaccines to be used in the military service, among which is a cholera- plus plague typhoid, paratyphoid A and paratyphoid B and Malta fever vaccine.

Autogenous Bacterins Not Essential

It is maintained by many that vaccines are absolutely specific in their immunizing action and that, for this reason, autogenous vaccines should be employed. However, experience shows that this is not essential; many cases progressing more favorably under the use of stock vaccines than when treated with autogenous preparations. This may be accounted for on the ground that, in cases of long-standing infections, a certain tolerance has developed between the infected tissues and the infecting organism; the antigenic influence of this particular organism not being such that the antibody which is evolved will exert a destructive influence on the organism. If an autogenous vaccine is prepared, antibodies produced in response to this vaccine may possess the same defect. Aside from the specific immunizing responses from a vaccine, certain non-specific collateral immunizing responses are also developed which perform a very important role in the treatment of infections. This fact is very aptly stated by Sir A. E. Wright in a paper published in *The Lancet*, (March 29, 1920), where he says:

"Let us just glance at the prospects which are here opened up. In the foreground stands the question of non-specific immunization. That immunization is always strictly specific, counts as an article of faith: and it passes as axiomatic that microbic infections can be warded off only by working with homologous vaccines; and that we must in every case, before employing a vaccine therapeutically, make sure that the patient is harboring the corresponding microbes. I confess to having shared the conviction that immunization is always strictly specific. Twenty years ago when it was alleged, before the Indian Plague Commission, that antiplague inoculation had cured eczema, gonorrhea, and other miscellaneous infections, I thought the matter undeserving of examination. I took the same view when it was reported, in connection with antityphoid inoculation, that it rendered the patients much less susceptible to malaria. Again, seven years ago, when applying pneumococcus inoculations as a preventive against pneumonia in the Transvaal mines, I nourished exactly the same prejudices. But, here, the statistical results which were obtained in the Premier Mine demonstrated that the pneumococcus inoculations had, in addition to bringing down the mortality from pneumonia by 85 percent, reduced also the mortality from other diseases by 50 percent. From then on, we had to take up into our categories the fact that inoculation produces in addition to 'direct' also 'collateral' immunization. This once recognized, presumptive evidence of collateral immunization began gradually to filter into our minds. Among, I suppose, many thousands of patients treated by vaccine therapy in private and in hospital, it happened every now and then that a patient was treated with a vaccine that did not correspond with his infection, and that the patient indubitably benefited. Again, it was not an uncommon experience for the subjects of a very chronic infection (such as pyorrhea), who were treated first by a stock vaccine and afterwards with an autovaccine, to assert that they derived more benefit from, and to ask to be put back upon treatment by, the stock vaccine.

"From such cases, hints are conveyed to us that there may exist a useful sphere of application for collateral immunization; and that such sphere may, perhaps, be found in those cases where the infection is of very long standing, and where the patient has become very sensitive to, and has probably come very near the end of his tether in the matter of immunizing response to the particular species or strain of microbe with which he is infected. It will, with regard to such patients, be remembered that they constitute the third of those three classes of cases to which I referred at the outset of this lecture as very intractable to vaccine therapy.

"We are, however, here considering primarily the question of principle; and in

connection with this, what is of fundamental importance is, that we should discard the confident dogmatic belief that immunization must be strictly specific and that we should in every case of failure endeavor to make our immunization more and more strictly specific. We should, instead, proceed upon the principle that the best vaccine to employ will always be the vaccine which gives on trial the best immunizing response against the microbe we propose to combat.

"I would point out that this would almost certainly not involve any revolutionary change in the accepted practice in either serum therapy or in prophylactic or ordinary therapeutic inoculation. But, it would mean taking into account, in cases which proved intractable to treatment with the homologous vaccine, the possibility of seeking for collateral immunization by inoculating a microbe or mixture of microbes other than that with which the patient is infected. The trial of this procedure might perhaps recommend itself where from the outset there is very little immunizing response to the homologous vaccine, and also where, as in very long-standing cases of tubercle-bacillus or streptococcus infection, the power of direct immunizing response to the corresponding vaccines is becoming exhausted."

In the treatment of extensive acute infections, it is very essential that treatment should be started early by giving large doses, usually 1.0 mil, of a standard stock suspension for an adult, at daily intervals, and in extensively bad cases, twice daily until the extreme acute symptoms have subsided, then at two to four days' intervals until recovery is complete.

In minor acute infections, early treatment is essential because, by early therapeutic immunization, serious complications from minor infections are avoided. In these minor acute infections, treatment should be started with a small dose, usually 0.2 mil, and gradually increased to 1.0 mil, making inoculations at one to two-day's intervals for the first few injections, then from three to five days apart.

In subacute and chronic infections, treatment should be started with a small dose, 0.2 mil, and gradually increased to 1.0 mil, making inoculations at five to seven-day intervals.

The Coleman Nerve Test

By WALTER M. COLEMAN, F. P. S. L., Cambridge, England

THE new nerve test devised by me and published in CLINICAL MEDICINE for April 1920, is first of all useful in picking out cases of hysteria or cases with hysterical elements. This is the opinion of Dr. H. Warren Crows of Harrogate, and others. If it aids in settling that baffling problem, it will help physicians over the most doubtful point in many of their cases. A physician was recently suspicious as to whether there might not exist even a psychic factor in a case of rheumatoid arthritis. When the Coleman test indicated that there was, he used suggestive treatment and the patient was relieved in a few days. There has been no recurrence.

I will give an example of the use of the test, and of the amateur wartime treatment that I had to devise, although I am not a qualified medical man. The patient's physician was at the front, however, and the idea of having another attendant distressed the lady. She was depressed. The test, by the method described in my first article, showed only one after-image. I tried to cheer her up but did not mention hysteria. After another Zeppelin raid or two, she began to have attacks in the office where she worked, namely, the Bureau of Propaganda. She said to me that she always felt such a fool on coming out of these attacks.

I instructed her to stand and sit with perfect symmetry between right and left. Her work was with the pen; so, she was told to place the left hand on the desk symmetrical with the right and move it out symmetrically as she wrote. This was to prevent any strain to the spine. Especially, was she to leave off the habit of

letting the head hang coyly to one side and also the habit of sitting with the feet drawn to the left. When she walked, it must be with an easy swing, springing off equally from each foot. Soon, the attacks ceased. One day she said, "I thought I was gone this morning. A wire came to one at the next desk; informing her that her husband was killed in France. She fell over in a fit and three others also went into hysterics. I felt myself going, but, I steadied myself in a balanced position and the feeling soon went away." In helping this friend, whose husband was in Mesopotamia, I was only trying to do my bit and I trust that my readers will pardon this short intrusion into the medical profession.

A man with a systolic murmur, who had been discharged from the army because he could not carry his pack, gave the opt: RNRNRN. He tried a similar change in habits of posture and movement. Thereupon, his heart no longer distressed him except that he fell in love and wanted to get married. His opt had become: RBNLB.

A teacher, a C. O., had been ostracised and persecuted. His opt was RLRLRLRL showing "nerves," but, no hysteria. As persecution ceased, he got: RLRLBRL and the B's became more frequent until he recovered and then got usually opt 1.

I have shown that opt RLRLRL means anoxemia, or under-ventilation of the blood; opt B means hyperoxemia; RLB means balance. Hence, a neurasthenic (with RLRL) has badly-ventilated blood. The strain of continuous faulty postures and unbalanced movements keeps them fidgeting and restless. The worst misunderstanding one can have is with Old Man Gravitation. He pulls on you to the tune of 160 pounds all day long and, unlike the candidate for nervous exhaustion, never gets tired. I ask physicians to consider the most powerful force that acts upon us, as a factor in neurosis.

In hysteria, anoxemia and fatigue products have a still stronger hold, so strong in fact that the two eyes and the two brains cannot fully function along together but one must rest while its mate is in full function under a higher vascular tension. A study of the temple pulses in your patients will show this. In the nervous, there is this continual right and left shift as the panoramic after-images show. In hysteria, the shift is very slow, and also after exhaustion, or there is a permanent predominance of one side and higher tension in the carotid artery of that side. When we say, a man is "unbalanced" or has "lost his equilibrium", we are not always speaking metaphorically.

Weak or tremulous patients may not hold the card steady enough for a good impression on the retina and, in such case, an old stereoscope with the lenses removed or a simpler rack with a handle may be used to support the card.

WE sometimes hear loud laments over the mistakes of doctors, but what of the mistakes of statesmen? For six years the mistakes of statesmen have turned the world mad, one costly blunder following another in orderly sequence. The occasional mistake of a physician at rare intervals and under unusual circumstances may cost a single life, but the mistakes of statesmen in these six years have cost the world 12,000,000 *lives and the fighting still goes on! And scarcely a word of criticism is heard of it. The statesmen get the honors, medals, citations, and honorariums of the world; the doctor the black balls, anathemas, scoldings and penalties. For one, the wine; for the other, the hemlock. A queer world, but it's getting better and in this is our hope.—"Medical Pocket Quarterly."*

What Others are Doing

NATURAL DIPHTHERIA IMMUNITY

F. V. Groer and K. Kassowitz (*Ztschr. f. Immunitätsforsch. u. Exper. Therap.*, Jena, 1919, 28, 327) report on their study of the Schick reaction and reaction to toxin-antitoxin mixture in 1,062 children, up to eighteen years of age. They show that 85 percent of children at birth have some slight immunity to diphtheria. The curve falls after the first year, averaging only about 28 percent that show some immunity at three years of age. It rises again about the time of puberty and reaches a maximum of 85 percent of immunes at the eighteenth year. The authors conclude that three factors are operative in this incidence of normal immunity.

1. Passive diaplacental immunity of the newborn, which is gradually lost during the first year of life. Children fed on the bottle lose this more rapidly than breast-fed children.

2. Autochthonous formation of antitoxin by the child itself, beginning about the thirteenth year, particularly supposed to be a function of serum changes associated with puberty.

3. Active immunization artificially produced. [*Abstr. of Bact.*]

TREATING STERILITY WITH GLANDULAR EXTRACTS

Bandler reminds us (*N. Y. Med. Rec.*, March 6, 1920) that other hormones than the ovarian are concerned in the menstrual and climacteric disorders in women. The hot flushes so often complained of, for instance, are due not only to absence of ovarian secretion but also to pituitary hyperactivity. The extract of the latter gland, also sometimes the adrenal substance, is called for on this account, along with the gonad.

The author says, he has been using ovarian secretion (corpus luteum much less often than the whole gland) and, more recently, the secretion of the interstitial substance, both by mouth and by hypodermic injection, with gratifying results in a widening range of cases.

The nervous and hysteric symptoms common to women, especially during the menopause, and preceding menstruation, are ascribable frequently to relative hyperthyroidism, lacking due trophic stimulation by the gonads.

The endocrine therapy consists, therefore, in giving the glandular extract or substance either (1) for the purpose of providing artificially the trophic stimulation that is absent or insufficient; or (2) for the purpose of inhibiting the plus or overactivity of another endocrine member. Overactivity of the pituitary (posterior) is responsible for many cases of uterine dysmenorrhea; to curb this, a gonadal extract is indicated. Bandler, having used it in a large series of cases, has found it of the greatest value in dysmenorrhea and repeated miscarriage, as well as pelvic malconditions and general asthenic states.

The ovary is closely related to this gland and to the adrenal medulla. This relation is responsible for the female characteristics of coyness and display.

The anterior pituitary has much to do with the lack or presence of the sex urge; it may be given, therefore, in frigidity with hope of success.

It goes without saying, so far as sterility is concerned, that no case is eligible for endocrine therapy, as outlined, in which local anatomical defects exist such as closed tubal ends, dermoids, tumors and bilateral salpingitis. Further, of course, the presence of normal spermatozoa in the seminal fluid must be established.

LESSONS OF THE WAR

Under this title, an editorial appeared recently in the *American Journal of Surgery* (Dec. 1919) in which it was asserted that some of the greatest surgical advances to our credit were made in the war period,

under the stress of necessity. Then it was that we learned how, better than ever, to treat wound infections, thanks to the wizardry of Carrel and Dakin. It is true, however, in reference to the original treatment with hypochlorite solution, that the precision and extreme technical skill required in its application discourages many from employing it in civil practice, in the face of the brilliant results effected by its originators.

In point of fact, the same and even better results are to be had by the treatment, as modified, in which sodium hypochlorite is displaced by Dichloramine-T, a chlorine-carrying synthetic which now is provided in the form of tablets with which solutions are readily extemporized. Having this agent, the difficulties are overcome; and there is indeed little excuse for any surgeon ignoring this great war development on the ground that he lacks the facilities.

The war taught also the advantages of *débridement*, or "wound excision", which consists in removing, along with any foreign body present, all tissues (save nerves and large vessels) immediately surrounding the track of the projectile. When done within a few hours after the casualty, it was found that the defect could at once be closed by sutures, a large percentage of wounds thus treated healing by first intention.

Burns caused by explosives and by gas brought problems which resulted in developing the socalled wax-dressing for burns. This is far and away superior to the older and prior dressings. It is easier and cleaner to handle; but, best of all, it relieves the pain as was never before possible with other expedients, causing the patient in many instances to comment on it gratefully.

AN OBJECTION TO HYPOCHLORITE SOLUTION

In a splendid article upon "The Chlorine Antiseptics," contributed by Dr. Walter E. Lee to the *Annals of Surgery* (June, 1920, p. 772), it is pointed out that the irritant action of hypochlorite solution is in inverse proportion to the vascularity of the tissue with which it comes in contact; that is, the destructive action is most marked upon avascular tissue and diminishes as the blood vessels are approached. Dunham showed that there is a distinct, unaffected zone immediately about blood vessels, while Hartwell and Butler have pointed out that, in some instances, the avascular tendon and cartilage were rapidly dissolved, unless protected by active suppuration and exudation. This phenomenon explains why the skin so readily becomes irritated by the application of sodium-hypochlorite solution when a strength of solution is employed that may be used with impunity upon an adjacent wound.

In this connection, Lee shows that the solvent effect of hypochlorite solution upon pus, wound discharges and devitalized tissues depends not upon the chlorine contained in the hypochlorite, but upon the fact that, when this salt breaks down, with the release of chlorine, the NaO combines with hydrogen to form NaOH, that is, sodium hydroxide, or caustic soda. It is this alkali that dissolves the wound secretion.

TREATMENT OF ICTERUS BY SUGAR SOLUTION AND HEXAMETHYLENAMINE

Before the Société Médicale des Hôpitaux, of Paris (*Gaz. des Hôp.*, May 22), Prof. P. E. Weil reported upon the results secured by him by the administration of the Murphy drip, introducing one liter of boiled water containing 45 Grams of sugar and 1.5 Grams of hexamethylenamine. Thirty cases were treated. In benign catarrhal cases (19), and in toxic icterus after neoarsphenamine (3 cases), the urine increased in quantity very rapidly, that is, after two to four doses, reaching a total 24-hour amount of 3 quarts, which was maintained. The symptoms of biliary intoxication disappeared, namely, headache, fatigue, pruritus, fever, while the appetite was restored. The feces rapidly assumed a normal color and diminished in quantity; the jaundice yielded.

Professor Weil found that the patients recovered in the course of one week and gained several pounds in weight. The only symptom that persists longer than that period is the bradycardia.

In icterus due to calculus, sometimes the same results are secured no matter whether the affection is recent or old.

By means of this treatment, the author has several times succeeded in avoiding surgical operation. However, if the ductus choledochus is obstructed by a calculus, in the presence of septic bilious fever or in

case of hepatic abscess, the jaundice persists without a lasting diuresis. In icterus due to cirrhosis and to hepatic or biliary neoplasm, the diuresis may fail to occur or it may be intermittent without being associated with the disappearance of the jaundice.

Aside from its therapeutic importance, this method possesses a diagnostic value because it makes it possible to recognize a latent liver cirrhosis.

ATROPINE FOR HICCOUGH

Dr. E. M. Sneed writes to the *Medical World* that he has found atropine a most effective remedy for the treatment of hiccough. He gives the drug to full physiologic effect. In some instances, two or three doses will give pronounced relief.

This suggestion is worth remembering and worth trying.

RECOGNIZING GOITER EARLY

It is claimed that goiter can be cured or greatly relieved in 90 percent of the cases if taken in hand while the trouble is incipient. If that is the case, it is vital that goiter be recognized early, the earlier the better, and surgical or other treatment at once begun. Especially is this true with reference to the exophthalmic variety. The exophthalmos comes late, as a rule; we must, if possible, recognize the disease before it has advanced to that point.

That is why a high value attaches to any new diagnostic conception assisting to this end, such as Goetsch gives us for example in a recent article (*Penn. Med. Jour.*, May, 1920). After studying 300 cases, he concludes that there is, in persons with hyperthyroidism, an increased sensitiveness to epinephrin. In other words, the sympathetic nervous system is rendered more excitable by epinephrin while in the process of raising the arterial pressure. In the light of this knowledge, he conceived the test alluded to.

After ascertaining the blood pressure from several readings, he injects subcutaneously, into the deltoid region, 0.5 mil (Cc.) (7.5 minims) of adrenalin solution, 1.1000, taking care to use only fresh solution. If the patient reacts positively, there is usually an early rise in systolic and a fall in diastolic blood pressure. In a mild reaction, the fall in diastolic pressure may occur alone. A rise in pulse rate takes place also; then a moderate fall; then a slight rise and subsequently a fall to the normal within 1½ hours. With this, one sees an exaggerated clinical picture of Graves' disease, especially as regards the nervous symptoms.

A normal person should show no reaction at all or a very slight one. Neither is there anything elicited in cases of pure colloid goiter.

The forecast is strengthened when there is observed, in a woman between 14 and 24, say, an unusually bright, alert and prominent eye, especially if, in addition, there are frequent complaints of morning headache and fatigue.

Nervous and circulatory symptoms simulating those of subacute thyroid disease are often present in hysteria and certain psychoneuroses. This test is useful toward helping the practitioner to differentiate between true glandular dystrophy and the last group of ailments. It is distressing to reflect that women are lightly turned aside as neurasthenics who really are suffering from incipient thyroid disease.

CLEWS TO GLANDULAR DYSFUNCTION

Exophthalmic goiter, asserts Kaplan (*N. Y. Med. Jour.*, Feb. 14, 1920), is amenable to proper treatment, that is to say with the proper glandular extracts, provided that the cases are seen early. Hence, the need of recognizing endocrine dysfunction in its incipiency, before disease has made its far and disastrous inroads. And, this is possible for, there are certain indications which are significant enough to the trained eye. Surgery is deprecated as being far from satisfactory. The author says, he would like to see a patient, with true Graves' disease, five years after surgical interference thanking the surgeon for what he has done for her.

Various signs point to the hyperthyroid tendency: history of freedom from infectious diseases in childhood, for instance; long, bluish-white, symmetric, close-set teeth; fair skin; fine, healthy, oily hair; and a more or less juvenile appearance. Whereas the hypothyroid, or the minus condition, is indicated by a rough and usually dry skin; dry scalp, and hair so brittle that

there is constant loss in the combings; puffy malar prominences with fine capillaries giving appearance of a constant flush; proneness to infectious diseases; inordinate hunger for sweets. The latter manifestation can be accounted for. The thyroid gland acts as a curb on the pancreas; when its secretion is below the normal quantity, the pancreas, not receiving the humoral curb, is able to metabolize more carbohydrates than usual.

The eye may bespeak approaching thyroid disease. A slight exopthalmos or, in other words, a bright, alert and prominent eye, in a woman between fourteen and twenty-four, is a little suspicious, especially when she complains of a headache or tired feeling in the morning. History of freedom from the infectious diseases common to babyhood and childhood is added evidence. In later life, these persons are seldom sick long but make quick recoveries. They are subject at times to hives, colitis and sinusitis, and their dependence on thyroid is established by giving the extract in small doses, say, ¼ grain once a day. This is the therapeutic test. Other corroborative facts may be elicited from the patient, such as shock and menstrual irregularations.

In short, acromegaly and other kindred diseases originating in glandular dysfunction may be recognized before advent of the classical symptoms.

Ovarian extract offers the best results in treatment, but pluriglandular preparations may be necessary; a dose of 5 grains is advised. The author has observed a rash simultaneously with improvement.

WHAT DOES CARDIAC PAIN USUALLY SIGNIFY?

In the *British Medical Journal* for the last week of January, Jones reviews 100 cases of socalled heart disease, in which a leading symptom was pain in the region of the precordium, with or without shortness of breath. As is well known, these symptoms may be present with no heart murmurs or other sounds such as are usually indicative of organic cardiac disease.

The average age of his patients was 54 years; 65 were males, 26 were laborers.

While pain in the chest may signify degeneration of the heart muscle (or exhaustion) and may be due to calcification of the coronary arteries, a lesion known to accompany many cases of angina pectoris, it may on the other hand spring from nothing more serious than digestive derangement. Flatulence, due to chronic gastric catarrh, is one of the most frequent causes of such cardiac symptoms as, shortness of breath, precordial pain and palpitation. The stomach, if distended with flatus, may act either reflexly or mechanically upon the heart. Perhaps, the latter occurs most often, therein raising the organ up, altering its axis, and thus disturbing its anatomical position.

In such cases, treatment directed to the gastric ailment usually disposes of the cardiac troubles. Sodium bicarbonate, with hot water, after meals; calomel once or twice a week; and simplification of the diet is recommended. Rest may be enjoined in some cases to good advantage.

Dizziness occurred in 29 of the persons examined; palpitation in 36; high blood pressure in 36; the heart was dilated in 61; and shortness of breath on slight exertion was present in 89 of the cases.

LIPOVACCINES

In a recent paper (*Journ. Ind. Med. Assn.*, Feb. 15, 1920) Hitchens recalls that the idea of suspending bacteria in oil for injection, in the prophylactic treatment against typhoid fever and other infectious diseases, was conceived during the war period. In the haste of mobilizing and dispatching soldiers to the front, it was found necessary to expedite the customary treatment, which meant giving three injections. If the whole quantum could be given in two or even one injection, without proving too severely reactive, much time might be saved. And this, it was thought, could actually be done by injecting the antigenic substances in some bland oil. From some such oil, they would be slowly released within the organism, with little or none of the violence as ordinarily arises from too quick absorption of antigens, particularly when exhibited in undue quantities. At first, petrolatum was tried but the vegetable oils proved to be better for the purpose.

So far, oily suspensions of this type have been used against typhoid infection, pneumonia, meningitis, dysentery and the cholera plague. More extended usage will be necessary to determine their actual value.

Let's Talk it Over

Scientific Food Preparation

4. Compatibility of Foods

[*Continued from September issue, p. 614*]

SINCE the preceding article was sent to the editor, I have received a copy of a new book on diet, by Dr. William H. Porter, formerly professor of dietetics at the Post Graduate School and Hospital of New York. This book, entitled "Eating to Live Long," does recognize the importance of proper food combination. Dr. Edwin F. Bowers, a well-known writer on health problems, says, in the introduction, speaking from his own experience with Dr. Porter's system and observation of his work: "The incalculable benefits of the discovery of Doctor Porter, one of the world's foremost medical men, will accomplish more for the physical regeneration of humanity than any similar work of modern times."

"If it is true, as I confidently believe," says Dr. Porter, "that ninety percent of all human ailments, apart from disorders incident to old age or acute infections, are due to wrong combinations and foolish food selections, the health and longevity of the race would be incalculably enhanced" by following this regimen.

Doctor Bowers says that Doctor Porter's ideas are revolutionary, but that they have worked in his case and in scores of others, although, he believes, probably not five hundred physicians in the country would accept them.

Doctor Porter has stated some important facts about food combination, particularly the exclusion of fruit from combination with flesh meat and cereals and he gives what he regards as an ideal diet and which largely reduces incompatibility. However, he has established no general principles by which compatibility may be determined.

In the further explanation of the principles of compatibility that I have stated, I shall quote from this book of Doctor Porter's, showing wherein some of the facts he has adduced and the practice based thereon are vastly important; while some are evidently erroneous, for reasons that I shall explain.

5. Compatibility Illustrated

Of the thousands of medical students who took a final examination at the close of the past school year, probably not 1 percent would have attempted to answer the following question: Mention three examples of incompatibility of foods and state the three general principles or rules illustrated thereby. Whereas, had "drugs" been substituted for "foods," probably not 1 percent would have failed to get a passing-mark on the answer.

I tried to show, in the preceding article, that a due understanding of compatibility of foods is even more important than an understanding, for the medical practitioner, of compatibility of drugs. Further justification of this view will appear as we proceed.

The remarkable results from dietetic treatment secured by even a superficial observance of a few of the facts of food combination to which I have already referred, by the author of a book recently published, in which the vital importance of food combination is clearly stated, indicates that it is worthy of the most careful attention, in the preparation of food for both sick and well.

An article has also been published in the *Journal of the American Medical Association* (Aug. 7), on the feeding of children, by Dr. Dwight Chapin (whom I regard as our ablest American authority on infant feeding), in which he says that children should be taught to live on simple, nutritious and inexpensive food and that the practical value of cereals and milk has been

demonstrated on a large scale, during the war, in Denmark, on the advice of Doctor Hinhede, the distinguished Danish monodietist. The remarkable results from feeding my own children for now nearly four years on modified whole-wheat bread and milk exclusively, as already explained in CLINICAL MEDICINE (April, p. 251) and in an illustrated article in the *National Magazine* (September), are due not only to the positive advantages of a complete, balanced, wholesome ration, as stated by Doctor Chapin in the article referred to, but more to the avoidance of incompatibility to which the average child is subjected that is furnished the average meals prepared without any recognition of the principles of compatibility.

I stated in my preceding article that, when my work in the investigation of compatibility began, about twenty years ago, hardly a word was to be found, in any standard work on diet, about compatibility. Further, the statement of the principles of compatibility, in the article of this series referred to, is the first systematic treatment of the subject that has been published in standard journal or textbook. I might quote from works of recognized standing on diet that have been published within the past five years, to show that this subject has been almost wholly ignored till now, several authors either denying its importance or ridiculing the idea, includng the otherwise excellent manual of the Life Extension Institute, which, though having the cooperation of a hundred of America's best-known authorities on hygiene, does not mention compatibility in its treatment of the subject.

To exemplify the rules for compatibility already stated, let us take a few illustrations from the work of Professor Porter, to which I have referred. "Eliminate fruit, cooked or raw, with (from) meals," says Doctor Porter. "Nothing that can be taken into the alimentary tract is as likely to prevent the perfect digestion and assimilation of the proteid elements of the food as is fruit. If fruit is to be used at all—in most conditions it is well to eliminate it entirely—*it should be taken in the form of a fruit breakfast, and never at a time when there is other food in the stomach.*"

The reasons for avoiding the combination of fruit with other foods, which I have so emphatically advised for more than ten years, in my "Daily Health Hints" in the newspapers and elsewhere, should be quite clear to any one who understands the explanation given of the fundamental principles of compatibility. Obviously, fruit and beef, or pork, are especially incompatible on account of the difference of time in their respective digestions, of the secretions required and of the chemical incompatibility of fruit acids (especially malic) with saliva and gastric secretions, starch digesting only in an alkaline medium and protein digestion being retarded by other acids than organic hydrochloric acid.

Doctor Porter explains the incompatibility of fruits with other foods, thus: "First, the taking of fruit acid with other foods has a tendency to inhibit the normal secretion of hydrochloric acid. Second, because when fruit acid is used at the same time that starch and sugar are taken into the stomach, it excites fermentation of the starches and sugars, thereby causing the production of an excessive amount of lactic acid." Of course, fermentation must follow from the unfavorable conditions for digestion, with excessive secretion of lactic acid which, causing undue contraction of the pylorus, tends to further fermentation, the chief factor in the development of gastric ulceration, forerunner of cancer of the stomach—and, hence, one of the reasons for the conclusion that variation in feeding is the chief factor in the causation of cancer, an etiology that is becoming familiar.

"I have found it necessary," says Doctor Porter, "to exclude potato from the dietary, not because it is indigestible, but because it is too digestible—so easily assimilated that it uses up most of the oxygen and there is not enough left to oxidize sufficiently the proteid molecules. I have any number of patients who, if they eat potatoes at the night meal, will have an overproduction of uric acid the next day."

Why potato is particularly incompatible with flesh meat, with fruits, sour milk, beans and any other high-protein and slow-digesting foods, I need not explain, since the principles, already stated, make that clear. In the treatment of my own brother's serious case of gastric ulceration, a few years ago, I used potato, carefully prepared, with good results and the Irish poor live well on potato and skim milk or but-

termilk, with a very low cancer rate, but, I have rarely seen potatoes on my own table and very seldom use it in my sanatorium work—never in combination with any other food than bread or vegetable soup.

"We do not realize," says Doctor Porter, "that foods, perfectly good in themselves, may be rank poisons when combined with other foods in such a way as to produce fermentation."

My efforts to demonstrate this by the monodiet experiments made in Chicago, in 1907, were, for the time being, almost wholly wasted, then, and apparently till quite recently, because scientific food preparation was hardly thought of.

"Only a limited amount of one vegetable at a meal shou'd be eaten," says Doctor Porter. The digestion of green vegetables is so much different from that of other classes of foods that the mixture of them with others must cause more or less trouble. I have not eaten an ounce of green stuff in fifteen years. What result should we expect from feeding a lion on flesh and greens? Would a rabbit fare any better on such a combination? The scientific feeding of the chimpanzees, at the Bronx Park, New York, and at the London zoological gardens excludes all green vegetables. Fruits in season and bread and milk in winter is the food of our nearest relatives where feeding is a real science.

In Doctor Porter's "Ideal Mixed Diet," which I can not fully endorse, only three foods are advised for each meal, the variation being much less than in that of the average diet. Good results must necessarily follow from such good feeding, although not the best results, as I have amply demonstrated.

I fully agree with Doctor Porter in the large exclusion of fats and in care in cooking to avoid the burning of fats, by using corn oil, olive or peanut oil, which have much higher burning points than butter or lard and in the entire exclusion of fried potatoes from even the ration of the wood chopper.

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Eureka Springs, Ark.

TREATMENT OF DYSENTERY

There has never been printed a series of articles that I enjoyed more than the "After Thirty Years," articles by Doctor Rittenhouse. In the August number of CLINICAL MEDICINE, he gives us an article on dysentery which is very good. Still, though the treatment outlined has earned its reputation by years of successful administration, I think that there is a far better one.

The remedies used by certain physicians for more than 100 years have proven so successful that they have been placed among the few near-certitudes in medicine.

We know that under dietetic regulation and hygienic strictness, without medicine, an average case of dysentery will run on indefinitely or at least many days; under proper drug treatment, it can be cured in a few hours. The remedy (one of them) that will do this is the White Liquid Physic of the old botanical practitioners and adopted from them by the Eclectics. It is now used in the modified form in which the acid has been reduced one-half and the alum eliminated. In this form, it is equal to the old one and much more pleasant. The formula is as follows: Sodium sulphate, 8 ounces; water, 24 ounces; nitromuriatic acid, 1 ounce. Mix and, if necessary, strain after it is completely dissolved. Complete solution often requires several days and I would advise its purchase, ready prepared, from the makers of Eclectic remedies. Of this, take a tablespoonful, for an adult, in ½ glassful of sweetened water, every hour until it converts the "flux" into a diarrhea. Then, rapidly reduce the dose, say, to a teaspoonful for three or four hours. By this time, your patient will be quite weak and you should give him a tablespoonful of flour moistened and rubbed up in water, added to pint of milk and boiled for fifteen minutes.

This is, I believe, the quickest way to cure sporadic dysentery. While not bad to take, it is, or was, objected to by many; hence, another method apparently as effective and much more pleasant is, to add to a glass, two-thirds full of water, 5 or 6 drops of specific medicine aconite and 10 or 12 drops of specific medicine ipecac. I know these medicines to be reliable and you must have such to get desired results. Of this mixture, give 1 teaspoonful every hour except the third when you will give a powder of 6 or 8 grains of magnesium sulphate and 10 or 12 grains of bismuth subnitrate. Dr. W. C. Cooper declared that this would cure 99 1/10 percent of

sporadic-dysentery cases and I believe him.

This last treatment is specially adapted to delicate women and children. The doses given are for adults. In epidemic dysentery, use the same powder; but you may have to alternate it with echinacea, baptisia, and similar remedies as indicated. In some bad cases, flush the bowels with a solution of aqueous extract of hamamelis, Lloyd's hydrastis and a small quantity of zinc sulphate.

I have had no experience with the amebic form and have no doubt that it requires different treatment.

A. O. REPPETO.

Banks, Oregon.

BLACKBERRIES IN DYSENTERY

Referring to the article on dysentery, by Dr. William Rittenhouse, in the August issue (p. 533) of CLINICAL MEDICINE, it has occurred to me that the readers of the journal may be interested in a paragraph taken from a book that I published some years ago and entitled "Man's Natural Food." The paragraph is as follows:

"Campaigning in Virginia, in the summer of 1862, our 'hard tack' and coffee diet brought many of us down low with diarrhea and bloody dysentery. Fortunately, our Division went into camp for two weeks where the fields around were thickly covered with fat, soft ground-blackberries. Gormandizing on this luscious fruit for a couple of weeks, living almost exclusively on berries, cured us all of that terrible intestinal disease. Again, in the following year, while a prisoner of war, at Shrevesport, La., and having contracted dysentery just before our capture, I was perfectly 'cured' by an exclusive diet of watermelon, often so mellow-ripe that a Boston Health Board, that advocates the injection of cowpox virus into the innocent children as a prophylactic measure, would have condemned it!"

CHARLES E. PAGE.

Boston, Mass.

[Doctor Page's personal experience with blackberries, in dysentery, confirms the popular estimation in which this luscious berry is held. Blackberry cordial, or brandy, is considered to be highly efficacious in diarrhea and is frequently used for the relief of that trouble. Even the ancients had nice things to say about the whole plant. For instance, Dioscorides declares that infusion of the young shoots, also of the leaves, and the ripe fruit, "ease the belly, cure snake bite, strengthen the gums and heal soor." In Germany, blackberries form a popular remedy in diarrhea, in the form of syrup, they are given in lung trouble and also for soor of children. (Cf. Hovorka and Kronfeld, "Vergleichende Volksmedizin."). According to Bentley and Trimen, "Medicinal Plants" (Vol. 2, No. 100), the fruits of various species of Rubus (including the blackberry), as well as the young tops, flowers, and leaves, have for ages had a popular reputation as astringents.—ED.]

AN OLD RECIPE FOR ASTHMA

The other day, some friends of one of our friends, who at present are browsing in the British Museum, having a royal good time, sent to our friend this delicious bit of home-made wisdom, spiced with humor, that they found in the *Magazine of Magazines*, for February 1751, where it had been reprinted from the *Gentleman's Magazine*. The recipe for asthma given there enjoins sensible dietetic rules as follows:

Turn your eye from ham, tongue, pig or pie, and all meats in salt.
"If venison pastry is set before ye,
Each bit you eat. *Memento mori.*
Your supper, nothing, if you please;
But, above all, no toasted cheese.
The use of vegetables try
And prize Pomona in a pye.
For breakfast, it is my advice,
Eat gruel, sago, barley, rice."

VIENNA PHYSICIANS DESTITUTE

Vienna is today battling for its very existence. The gay crowds of well dressed people and elegant equipages which once thronged the magnificent Ring and the lovely Prater have long since vanished. The fine trees of the Wiener Wald have become victims of the woodchopper.

A recent dispatch to the *Musical Courier* says: "Vienna is the saddest city in the world. If one is soft-hearted, it is difficult to repress the tears as one wanders through its once brilliant streets. While one stops to greet a friend, three beggars or more appeal to one's charity. And such beggars: ragged and haggard, emaciated,

yellow creatures that once knew joy. As one rides through the streets, poor mothers with thin, paper-skinned babies look at one from the curb. Hands stretch out from everywhere."

A prominent New York banker, recently returned, says: "All that class (professional people) are left with absolutely nothing. All the time I was in Vienna, I couldn't help feeling that I was living in a morgue. Beautiful streets, a beautiful opera house and the city beautifully kept—but, nothing doing. It is terribly depressing.

Viennese physicians are in desperate straits. Their work must go on at all events, in an effort to combat the increasing mortality and alleviate the many ills of an undernourished population. But, they can not feed their little children with the scanty government ration, even when supplemented with their pitifully meager incomes.

The American Relief Committee for Sufferers in Austria, 261 Madison Avenue, New York, of which Hon. Frederic Courtland Penfield, late American Ambassador to Austria-Hungary, is Honorary Chairman, has created a special fund for the relief of destitute Viennese physicians and surgeons. The need of the medical men is the more distressing as their honorariums amount to less even than the wages of servants, charwomen and such.

Contributions may be made to Alvin W. Krech, President, Equitable Trust Company, 37 Wall Street, New York City, Treasurer of the Committee.

Almost with the same mail which brought this appeal to us, we received another one from the American Welfare Association for German children. This association numbers among its patrons such well-known Americans as Miss Jane Addams, Dr. Chas. S. Bacon, Dr. Otto T. Freer, Dr. Alice Hamilton, Dr. Emil Hirsch, Prof. Robert Morss Lovett, Mr. Harold F. McCormick, Mr. Medill McCormick, Judge John Stelk, Prof. James W. Thompson, and many others.

This association pleads for help to be extended by Americans to save hundreds of thousands of innocent children in Germany, who, inevitably, felt the effects of the blockade and now are suffering from rickets and tuberculosis. This appeal is a call upon us to finish our fight for humanity, to show our Americanism in the true sense of the word.

Checks in support of this undertaking may be sent to Mr. William H. Rehm, Treasurer, 154 W. Randolph St., Room 96, Chicago, Ill.

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[Of course, we have already contributed to both causes. However, the need is great and continues almost unabated. Let's go down in our pockets once more; deep down, where the bigger bills are tucked away. Here are instances where we must give, and give again—even if we have to do without things—such as, cigars, for instance. Anyway, let us all help the doctors of Vienna and their starving little ones; and let us, likewise, remember the starving German children, thereby doing our share to eradicate the ill-feeling of the war, to return to a larger, juster, more humane viewpoint and to contribute to a healthy and wholesome restoration of the German people.—Ed.]

WHEAT-BRAN AND WATERMELONS

These two words go to make up a subject that would be about the last thing to expect in a medical journal, but, there is truth and food for thought connected with these that is very valuable when it is all thrashed out.

I want to give you some of my experience, which is better than theory, as "the proof of the pudding is in the chewing of the rag."

I have suffered with chronic constipation of long standing. Having practiced medicine for twenty-five years and being habitually constipated even when I first began to read medicine, I have had ample opportunities to read and consult with authorities and try all known remedies for constipation, though with but little or no relief. Physicians well know what one has tried when he says that he tried them all—medicines, habits, diets and all the rest, but, all to no effect until finally I fell upon the bran treatment, or dieting—whichever you have a mind to call it.

I began using bran cooked with oatmeal, making it about one-fourth, for breakfast, with, possibly, a poached egg and a small piece of biscuit which also was one-fourth bran. For dinner, a cornbread muffin made in a regular muffin iron and containing

about one-fourth bran was crumbled in some plain soup; for supper the same kind of muffins, but, this time, crumbled in sweet milk. This was my whole diet. To my surprise, in ten days, I was having a regular morning action, soft and mellow, which I had not had in my whole life. All this, without a particle of medicine, while, right up to this time, I had been forced to take Cascara Compound, F.-E. Cascara, and Hinkle's Cascara and other pills in order to get any action at all, even then sometimes failing. That was some two or three months ago and I am still a strong advocator of this treatment.

The world is using too much white bread and artificial foods. We need more graham bread and foods like those that nature prepared; namely, the whole grain.

The bran alone did not accomplish all the good results, but water played a great part in this.

I have, in connection with the bran treatment, been drinking from two to four large glasses of soft water before breakfast and would put off breakfast long enough until I could drink that amount, about twice that amount between breakfast and the noon meal, and the same again during the afternoon before supper, while two to four more glasses were taken before retiring.

Before I began the large quantities of water, I noticed, even with the bran, that my stools were more or less dry the first half, though the last half was moist and in good condition.

Now, there is a reason for that and it is simple enough when properly considered. There was such a scarcity of liquids in the system that the little moisture present in the fecal matter, when it reached the rectum, was partially absorbed with toxins, the same as an enema. The reason why the last portion had more moisture was, that it had not been there long enough. However, when the system was flooded with water so that every cell and tissue was dripping with it, the fecal mass remained moist in the rectum until defecated.

Here are a few thoughts that we should all get, not only regarding the reason for the drying of the fecal matter, but as to keeping the tissues well saturated all the time with water. Most people fail to do this and, as age advances, this more and more often accounts for the inactivity of old age and of old tissues. Here is a thought to build upon for attaining longevity.

As I have just stated, a large portion of the human race does not drink water enough; they do not have the thirst and they let that be their guide. Moreover, the majority are too poor or too stingy to attend a few weeks at some good watering place and get thoroughly saturated once in a while. Here now comes another question—what is it that we get the greatest benefit from at the watering places, the minerals in the water or the water itself?

At a watering place, you will see fellows standing around with an old gourd or drinking vessel pouring in the water every few minutes, and this is a continual performance during the greater part of the day. In consequence, the poor fellow is getting the water and saturating every tissue in his body until it is dripping with water. Now, here is where he is getting most of the benefit and not from the mineral. We physicians can supply those in any quantity the patients need and we are doing that all the time.

Now, the melon was mentioned way back there and all have been waiting to see what part it played.

Now, then, one month's feasting on good, well-matured, ripe watermelons is worth as much to me as a trip to the watering place, as far as the water is concerned.

Therefore, the next fellow you have that has been suffering with chronic constipation, that is a small water drinker and has a scant kidney action; looking as though he were about to dry up and blow away and being too poor or too stingy to go to a watering place and get the staves soaked up—put him on the watermelon treatment as it will, probably, be easy to get him to take hold of that.

This is now quite a bit said about bran and melons. When the whole is summed up, a very few words will contain it all and the thinking man can extract it and get a fountain of good ideas out of it.

The CLINIC slogan is "Clean out, clean up and keep clean," but a large quantity of water is necessary to do this.

A. C. BYARS.

Wilburton, Okla.

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[Undoubtedly "water enough" is the solution in a great many cases of constipa-

tion and autointoxication. Whether we drink it from the glass or eat it in the form of melon, makes little difference. The last may be a more pleasing way, however.—ED.]

EXONERATION OF THE APPENDIX[1]

There are always opportunities for honest physicians and surgeons to differ as to the cause of disease and the methods of treatment. The problem of "appendicitis" has been a study of mine since the operation became the vogue. It is admitted that in a great many cases the appendix is taken out in a perfectly normal condition, showing that in such cases it was not the cause of the trouble. In my opinion, there are a greater number of normal appendices removed than is admitted.

I have found in a particular case of pelvic inflammation that, if taken at the very onset, the following simple treatment very speedily ends the pain and puts the patient at ease: the attending physician will pull up on the transverse colon, or he will push up, and press along the entire course, thereby unloading the ascending colon and moving the contents of the entire gut, thus giving the needed relief. If the treatment of pelvic inflammation be wrong or the case neglected, it is easy to understand that the inflammation of the colon will reach down to the appendix. We have seen cases in which this little useful organ has been sloughed off and everything healed up, the patient going about his business; still, he would have subsequent attacks of the same character as before.

[We also have seen "appendicitis" in persons who had had appendectomy performed years before.—ED.]

A man consulted me some time ago describing his abdominal pains in a way to lead me to express my surprise that he had not been operated on for "appendicitis." He replied that he had considered having the operation, but an X-ray had shown that he had no appendix.

In an article on this subject in the *Medical Times*, New York, many years ago, I quoted the case of Congressman Cutler of New Jersey who had an attack and submitted to the operation. He was etherized, opened up, and they found he had no appendix; but, there was the little cicatrix where it had sloughed off and healed up nicely. It is altogether probable that, if he had been operated on at the time the appendix did slough off, the operation would have been fatal.

I have not the slightest question as to the honesty and sincerity of doctors who advocate appendectomy, but, there is always a chance for them to be mistaken. When a patient, operated on, makes a recovery of it, the surgeon is apt to attribute this to the operation, when, in fact, it may have been in spite of it. Patent-medicine manufacturers have no end of testimonials of patients who got well after taking their laxative cocktails, the testimonials relating to the last one taken!

As for "cleaning out the colon," so commonly recommended, every dose of physic, boring a hole through the patient, so to say, is mischievous and likely to aid in bringing about fatal results. However, in operative cases ending in recovery, it is natural for a surgeon to attribute good results to the operation; while, in case of death, he may believe that death occurred in spite of right treatment.

With regard to fatalities from abscess, or boils, I have noted a great many that I attributed to the surgery. In cases that I have treated by means of hot fomentations, a threatened boil has been prevented or, if far advanced, opened naturally, and with no serious results under proper treatment.

In one article, some years ago, on "The Exoneration of the Appendix," I quoted the eminent Metchnikoff who declared that attacks were not caused by the appendix but by the colon. He advocated the removal of that entire organ; and, this has been done occasionally; however, I find no reason for approving it.

As for the alleged uselessness of the appendix, the more thoughtful students of physiology and hygiene know better. Sir William McEwen, M. D., the eminent professor of surgery of the University of Glasgow, approves of the appendix and has set his face against appendectomy. He explains that the cecum is an important digestive organ, and that it and the appendix are thickly lined with glands that secrete a digestive fluid of great value when in

[1]Written at request of one of your subscribers. —C. E. P.

combination with other intestinal juices. The appendix, he says, also pours into the cecum large amounts of mucus highly useful in lubricating the alimentary bolus, and at the same time repressing the development of injurious bacteria. Doctor McEwen calls attention to the almost universal pre-existence of constipation in cases of "appendicitis", and also to the fact that those who have lost the appendix are thenceforth more subject to enteritis.

A case in point: Mr. G. tells me of his operation, several years ago, which cost him about $1,200, and he has had more frequent attacks of "appendicitis" since the removal of the appendix than formerly; that is, painful inflammations of the same character as the one for which the surgeon operated! His experience is like that of numerous others known to me.

Sir Henry Burdett, another celebrated English surgeon, recently touring this country and addressing medical societies, said some very strong things against "the craze for operations." "What we want," he declared, "in every country is, a voice in the mouth of every great surgeon who, with the wisdom to be conservative, has the courage to protest against this ever-growing tendency to put a knife into everybody on the smallest possible pretext."

CHARLES E. PAGE.

Boston, Mass.

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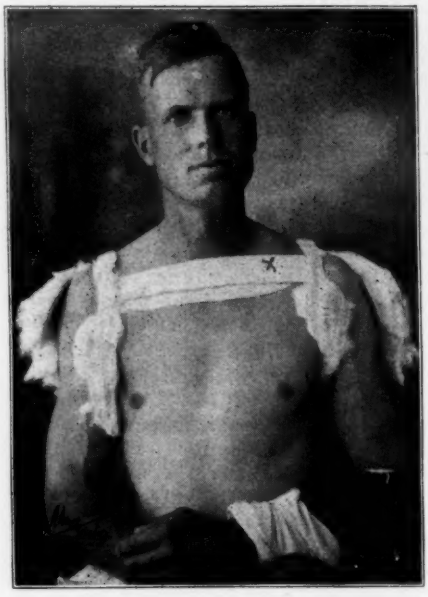
[Doctor Page is, of course, fully justified in his opposition to indiscriminate operating in every case of abdominal pain. We had been of the opinion that surgeons *had b*ecome more conservative; but, he assures us that, to his certain knowledge, that is not the case.—ED.]

TREATING FRACTURED CLAVICLE

Here is a snapshot—fore and aft—of my method of treating fractured clavicle.

If the patient is flat across the shoulders, I use a box lid, 3/8x3 to 5 inches, according to the size of patient, and long enough to reach to the outer end of scapula. If the shoulders are round, I use a stave from a nail keg, padding this with two layers of cotton, and cover with three thicknesses of gauze drawn tightly and fastened with adhesive tape as shown in the picture.

The splint is fastened with two-inch adhesive tape long enough to go around under the arms. The tape is wrapped with gauze bandages, excepting the outer end so as to keep it from sticking to the cotton. The ends stick to the board and are secured with thumb tacks. To hold the brace down,



a short piece of tape is fastened around it, extending one or two inches below the brace, and to this the adhesive strap going down the back with the straps around the shoulders is attached just taut enough to put the broken ends in juxtaposition. Heavy toweling will serve for arm sling.

It will be better not to use this method on a patient whom you had formerly treated according to the old Sayre method. He might come back and lick you because you did not use the last method the first time.

After taking this picture, I sawed an inch and a half off of each end of the brace so that the coat would fit better.

J. D. EDMUNDSON.

Orland, California.

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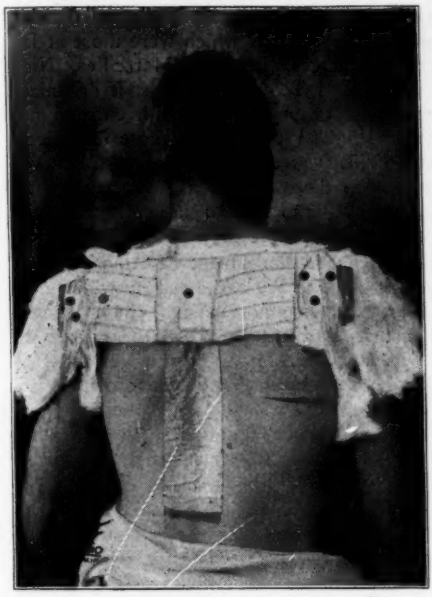
[This ingenious splint is quite similar to that employed by Hubert A. Royster, as described in *The Annals of Surgery* for October, 1919 (p. 474). In Royster's method, however, the barrel-stave splint is

fitted to the upper part of the chest, anteriorly, in such a manner as to keep the heads of the humeri from falling, or sagging, forward. Both methods are far superior to the old-established ones, in our



opinion. The one described by Royster was used by the present writer, recently, in the case of a little boy of four who had sustained a greenstick fracture of the left clavicle. The splint was tolerated without any objection and did good work.—Ed.]

LETTERS FROM FRANCE—XXV*

The Y. W. C. A. opened an international training school, recently, at 96 Boulevard Saint-Michel. The school is not under the direction of the American organization, but is the project of the "World's Committee" which has its offices in London and directs the work in foreign countries.

This school has been opened because there are so many European countries inviting the Y. W. C. A. to come in and conduct work for women and children, and these demands are far beyond the supply of trained social workers. It is, in the beginning, an "emergency training school;" the courses will run for three months, and, while an intensive programme of studies has been outlined and inaugurated, it is anticipated that a more permanent venture will succeed this one.

The school is under the direction of Miss Meta Glass, of Lynchburg, Va., sister of Mr. Carter Glass, American Secretary of the Treasury. Miss Glass has been teacher of Latin at Randolph Macon College and holds a degree of Ph.D. from Columbia University.

Already, there are forty-five young women registered as students, coming from twelve different countries of the Allies, from the Scandinavian countries and Switzerland. The courses offered are studies in social problems such as, hygiene, recreation, labor movements and legislation, a study of social, intellectual and religious problems in the various countries, religious psychology, together with "laboratory work," the visiting of social and industrial centers in Paris. There will be two lectures each day, in either French or English and, in the hotel in the Boulevard Saint-Michel, there will be resident tutors, in order that these young women, who come from countries having different languages, may have the opportunity to have these matters discussed in their familiar tongues.

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The Rockefeller Foundation Commission for the Prevention of Tuberculosis in France has now extended its work to portions of the devastated regions, to Alsace-Lorraine and to departments in the southwest.

The commission recently has been reorganized, and Dr. Linsly R. Williams (formerly Deputy Health Commissioner of the state of New York, and recently lieutenant-colonel, medical corps, U. S. Army) has assumed active charge of the work, replacing Dr. Livingston Farrand, who has returned to the United States as executive head of the American Red Cross.

The work of the commission during the past two years has proved very satisfactory and has exceeded all expectations. In the future, it will include a gradual extension of the territory covered, cooperation with French authorities in perfecting organizations already established, and the emphasizing of general hygiene, in addition to the measures against tuberculosis. A

*It is to be kept in mind that this letter was written several months ago.—Ed.

campaign of education in hygiene will be started in Paris during the autumn.

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The birthrate of France, which long before the war was the subject of anxiety, statistics each year showing a decline in population, continues to diminish in a striking way according to a report just presented to the General Council of the Department of the Seine. Whereas, in 1911, it reported 73,599 births, there were registered but 47,480 in 1918. The report also calls attention to the disappearance of the wetnurse. The Municipal Poor-Relief Department which, in 1911, was able to procure 1,368 such nurses, could find only 65, in 1918, to nurse foundlings, and the mortality among the latter rose from 5 percent, before the war, to 40 percent.

The effect on future generations is evident unless there is a radical change. Bonuses for mothers have been proposed, but large families in the days of the high cost of living are an impossibility for many people in moderate circumstances. For, like everything else, baby-rearing has been affected by high prices. Milk, cream, baby foods, eggs, linen, woolens and everything that the baby needs, as well as doctors' fees, everything has gone up without a proportionate increase in the wages or salaries of young married men.

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Owing to the departure of the greater part of the American Expeditionary Forces, the "French-Homes" Society, which for more than a year has been engaged in introducing American officers and men to French families, has decided to close its rooms at 24 Rue de Mogador, opened in February 1918, and to merge its work with that of the *Comité France-Amérique* at 82 Avenue des Champs-Elysées.

The work of counteracting the petty grievances that men of the American Expeditionary Forces gathered in brushing up against people they could not understand and who did not understand them, fell to this society. The good it has done may well be judged from the mutual feeling of satisfaction expressed by both the French families and the Americans they met.

With notable people in France connected with the society or actively engaged in its work, it could not possibly fail in its purpose. Among those active in its inception were, M. Henri Bergson, of the *Académie Française*, its president, and General de Berckheim.

During the war, the Paris District being banned as a leave center for American soldiers, the "French-Homes" society established branches in many provincial cities, the most active of which were those at Dijon, Limoges, LeMans, Marseilles, Nice, Rouen and Tours. In Paris, it organized receptions every Thursday for enlisted men at the Salle Wagram, and those for officers on Fridays at the Salle Hoche. Men who attended these receptions were, as a rule, invited later to teas and other functions by the French people they met there.

When the detachment of American students came to Paris, the society widened its scope, finding homes for these men in French families. Between the months of February and March, 1919, more than 1500 students were thus given comfortable accommodation and the opportunity to appreciate the French home. Besides this, they were able to perfect their knowledge of French.

Students who wished to make a study of French were given the opportunity to do so by the *Alliance Française*, which, at its quarters, 151 Boulevard Raspail, gave special courses every morning. Those who wished to study art at first hand were taken through the studios of French masters who permitted the students to watch them at their work.

The average American soldier found but little occasion to make further acquaintance with the French theatre than the various music-halls and vaudeville houses. Through the cooperation of Mme. Sarah Bernhard and other leaders of the French stage, the "boys" were given the opportunity of seeing the best plays of the French theater, presented by their best interpreters.

Thus was a bond of amity and understanding created by the "French-Homes" society, a bond that will not break despite the distance that now separates the American guest and his French host. This is manifested by the steady stream of correspondence that now flows between the two continents.

The "French-Homes" Society is being continued on modified lines, in the hope that, in the future, Americans coming to

France for business, pleasure or education will take advantage of the opportunities. It will continue to extend to all wishing to gain an intimate knowledge of France.

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Of all the American welfare organizations operating in France, the American Library Association, has been most reticent in the matter of publicity. As one of its workers remarked: "We have been so busy working that we have had no time to talk about ourselves." This indeed seems to be the spirit of the organization, whose gigantic ramifications are little known to the general public.

Wherever an American mission is, wherever American workers go, the books of the American Library Association go with them. Each of the numerous welfare organizations operating in France, the Y. M. C. A., the K. of C., the Salvation Army, the J. W. B., and the A. R. C., have received special reference collections from the Central Library in Paris. Special reference libraries, comprising 500 volumes each, have been sent to the organizations and special missions in Poland, Czecho-Slovakia, Italy, Turkey, Greece, Serbia, Roumania and, latterly, Egypt, where the American Y. M. C. A. is cooperating with the British organization.

Special reference libraries also have been sent to Palestine and to the two American missions now in Armenia, that of Colonel Haskell and that of Major-General Harbord. A letter recently received by the American Library Association from Lieutenant-Colonel Jasper Y. Brenton, a member of the American Military Mission to Armenia, gives an inkling of the esteem in which the work of the organization is held. This letter, addressed to Mr. Burton E. Stevenson, says: "On leaving Paris today for Armenia as a member of the American Military Mission to that country, I wish to express my appreciation of the valuable services of the American Library Association, and particularly of the attention of your representative, Mr. Kerr, who has spared no pains in selecting and securing the books that I have most desired to use in the work of the mission. Such services are invaluable in time of a quick departure on a mission of this kind, and they are deeply appreciated."

This letter is one of many received from every nook and corner of France and other parts of the world to which the activities of the American Library Association extend. The Paris Central Library of the association is the center of all this activity, and to this office came, last February and March, as many as 2,000 mail request daily for books from the men of the A. E. F. By May 1st, this number had gradually decreased to about 500 requests a day, owing to the return of soldiers to America. The books asked for included those treating on business, advertising, accounting and salesmanship. Books on governmental social economies, showing the growing interest of the soldier in his civic duties, ran a close second, which bodes no good to tricky politicians when the returning A. E. F. men take up the questions of the day. Requests for books on agriculture ran a close third, but, the call for books on all of these subjects varied but little. Books on scientific subjects, engineering, architecture, chemistry, and mechanics were also in great demand, the greatest number of demands for books on mechanics coming from the naval men in the port cities.

As happened to all organizations connected in any capacity with the risks of war, a large number of books were lost by the American Library Association, but, curiously, the Association often finds in checking up that it has more books coming back than it has sent out. This may be explained by the fact that all books salvaged in the various camps evacuated by the American soldiers are sent to this organization, with the result that many books find their way to its shelves that have not originally passed from them.

Besides supplying the A. E. F., the various missions and the welfare organizations, the American Library Association has given special collections of 500 volumes each to fifteen French colleges. These colleges include the Sorbonne, Rennes, Caën, Nancy, Poitiers, Dijon, Besançon, Grenoble, Aix, Marseilles, Toulouse, Montpelier, Bordeaux, Clermont-Ferrand, Lyons and Strasburg.

The American Chamber of Commerce in France has received 400 books on business subjects, which augment its splendid reference library (free to all) to more than 14,000 volumes. The completeness of this library may be judged from the fact that many soldiers seeking information on commercial subjects are referred to it by the

American Library Association. The *Bibliothèque de la Guerre,* the new war museum open to students at 39 Rue du Colisée, has received 200 volumes, while the *Ecole des Beaux-Arts* has accepted a collection on architectural subjects.

Thus is the American Library Association spreading books broadcast. But, there still remain in the Central Library 15,000 of the very best books that could have been culled from the vast number that has passed through its hands. The suggestion of Mr. Burton E. Stevenson, that the Central Library should be made a permanent institution in Paris, was adopted by the directors of the American Library Association at a meeting held at Asbury Park, N. J., in June last. Since then, various organizations in Paris have announced their willingness to take over the work. Whatever organization does assume the task, will be required to abide by three irrevocable rules laid by the American Library Association as the sole conditions on which it will turn over its library. "The library shall be free to American citizens and British subjects in Paris, and to French persons who wish to avail themselves of it. The rules under which books may be obtained will be the same as those now in force in American libraries, which are extremely liberal. A competent staff to administer the library must be assured, also sufficient funds for administration. New books must be added continually, so that the library may always be alive and up-to-date."

These are the rules by which the American Library Association will continue to exist, an outpost of Americanism in Paris, ever ready to serve transients as well as permanent residents, and a standing memorial to the work of Americans in France.

B. SHERWOOD-DUNN.

Paris, France.

FIRE-PREVENTION DAY, OCTOBER 9

October 9, the anniversary day of the great Chicago fire (1871), is observed by three-fourths of the states of the Union as Fire-Prevention Day. Governors of states and mayors of cities are accustomed to issue proclamations concerning it, and, as public-spirited citizens, physicians undoubtedly are interested in this matter. For this reason, we are glad to give publicity to the subjoined information received by us from the Chicago Association of Commerce."[1]

Interesting Data Concerning Fire- and Accident-Prevention Day

Fire- and Accident-Prevention Day is an important factor in the campaign for the conservation of the national resources by reducing the preventable fire waste of the country and the terrible toll of life and accidents.

It is especially important this year in view of the national campaign for the conservation of food stuffs and manufactured resources to reduce the high cost of living and the necessity of maintaining the earning power and production of the country.

The fire losses in the United States and Canada, in 1919, amounted to $269,000,775. So far, this year, they are more than $40,000,000 ahead of those at the same period last year. The state fire marshals and fire-prevention authorities generally agree that 75 percent of these fires are due to preventable causes and that they could easily be avoided by the exercise of reasonable precaution, individual and municipal.

The loss in earning power due to preventable accidents is over two billion dollars a year.

Over 15,000 are killed and 50,000 injured annually as a result of fire.

The fire losses and the cost of fire prevention in the United States amount to annually $700,000,000.

The annual per-capita fire waste in the United States is $2.50; in Europe, it is only 33 cents. Reason: Europe has better construction, less carelessness and increased responsibility.

An ounce of fire prevention is worth a pound of fire extinguishment. The way to get lower insurance rates is, to have fewer fires.

"WELCOME TO THE DOCTORS"

A subscriber recently sent us a clipping from the *Martin County Sentinel,* of Fairmount, Minn., which had been taken from *The Daily Sentinel,* having been written on the occasion of a meeting of the Southern Minnesota District Medical Society. This editorial is so good and shows such a kindly appreciation of the medical profession that we can not refrain from reproducing it here.

To the editorial writer of *The Daily Sentinel,* we express our thanks and make our bow.

"The doctors have come to town, some in airplanes, some in gas buggies and some in steam cars.

"They are here from far and near. They

[1] We omit publication of the proclamations by Governor Lowden and by Mayor Thompson of Chicago, for the reason that they contained virtually the same lesson as that offered in the remarks printed.

are here to exchange experiences, to tell each other something they have discovered in the purview of the profession which will hasten the recovery of some poor unfortunate and bring health and happiness to the sick and afflicted.

"The doctors are the salt of the earth. They are up to date, not only in their profession, but in all the things that are of general interest and concern the welfare of humanity. True, they specialize in physical frailties and the latest ideas in healing, but, take them on politics or religion or agriculture or astronomy, and they are there with the bells on. And they like baseball, golf and cards and we have known some of the headliners that were not so dull when it came to diagnosing the fine points in the noble American game of draw poker.

"Another thing: You will rarely find a doctor who is a tightwad. He is naturally progressive. He believes in improvement, not only in his patients, but in his church and community. Therefore he is a liberal giver and a free spender. He is also an easy mark for charity and gives in a modest way many hard-earned dollars that his left hand never knows anything about.

"Some of the most distinguished men in the profession are here and these men are here to tell you that they can learn something from the humblest physician in the smallest town.

"Fairmont feels honored by the presence of these men and they are welcome to anything and everything that can he had in a first-class law-abiding dry city. The law is such that, if they need a little artificial stimulant, they of all men on earth are privileged to get it, but the top notchers of the profession will tell you they can get along "just as well" without the use of alcohol and their patients can get along a good deal better.

"Again we say, welcome—thrice welcome to the disciples of Aesculapius. There are no better men on earth, either socially, morally, professionally or intellectually. May they live long and die happy."

TOBACCO POISONING IN NON-SMOKERS

On page 552 of the August, 1920, issue of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, appears an article by T. C. Humphrey, M. D., upon the subject mentioned in the title of this communication.

I am adding my experience because of the editorial following the article, in which the Editor wonders "whether this excessive sensitiveness is not due to some anomalous condition of the doctor's olfactory organs and upper respiratory passages."

Unlike Dr. Humphrey, I am not a good sailor. I have crossed the Atlantic many times, but have always been seasick. My first trip was made, in 1880, to the International Medical Congress, held in London. I kept my bed all the way over and, on coming back, I was carried on deck each day. There were many doctors on board all of whom took an active and professional interest in me and suggested measures for my relief.

The result was, each had a remedy that I was obliged to take out of professional courtesy. From the time I left America until my return, I lost eighteen pounds. I have suffered less and less from seasickness as I have grown older, but, sea voyages are distasteful to me up to the present day.

I have always suffered with sick headaches. In my early days, I would have two or three a week. They usually came on in the evening. I would sleep them off and in the morning feel strong and well, capable of doing any amount of work. I never was able to get permanent relief with drugs. As I grew older, these sick headaches became less and less frequent and, at sixty years of age, they ceased altogether.

I have always had, and have at the present time, an acid stomach. I am unable to eat fruits, raw or cooked, since they increase the stomach acidity. Only by vomiting am I able to rid myself of the stomach contents and the distressed feeling. As a boy, I was never able to smoke. As I grew older, the fumes of tobacco would cause me to vomit. At twenty-five years of age, the least whiff of tobacco smoke would cause me to remove myself from the locality because of a distressed feeling. It has never been possible for me to attend banquets, on this account. I have been obliged to give up our local medical society meetings and all other gatherings because those present persist in making pigpens of the meeting places. In elevators, it seems to be the delight of the smoker to raise his hand above those who are in the car and place the tobacco smoke directly under my nose. I often wish I could empty my stomach contents over his shoulder down his shirt front. I can conceive of nothing more vile to those who are susceptible to tobacco poisoning than to have the fumes constantly under one's nose. In recent years, I would have all the

symptoms of a sick headache, which would last for two or three days.

The wonder has always been to me, when I am suffering the tortures of the dammed, that those who smoke do not realize that, while they are enjoying a few minutes of pleasure, others in their company are in misery.

I am quite sure that there are many other people who are just as sensitive to tobacco poisoning as Dr. Humphrey and myself. It seems to me that this excessive sensitiveness is not due to some anomalous condition of the olfactory organ and upper respiratory passages, but to a general poisoning of the entire nervous system.

EUGENE S. TALBOT.

Chicago, Ill.

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[Doctor Talbot's letter, confirming the reports of several other correspondents, tends to make one think; as it shou!d. Those of us who smoke, are exceedingly prone to think only of our own personal gratification. We fail to take into consideration that, by indulging ourselves in public places, we transgress by making others miserable. When, a few years ago, Doctor Robinson, the Chicago Commissioner of Health, issued an ukas forbidding smoking in street cars and elevated trains, a great howl went up from various sources, objecting to this rule. Some brought forward the ancient cry that the "personal liberty" guaranteed to every citizen of this great country was curtailed thereby. This is all very well. However, one's personal liberty exists only in so far as it does not conflict with the personal liberty of the next fellow. If my indulging my personal liberty interferes with the pursuit of life, heal!th, and happiness of the man, or woman, standing next to me—I am abusing my privilege of personal liberty.

The answer is simple. Most smokers smoke too much anyway. No, Sir; I do not mean that even one cigar a day is too much. But, I do admit that most of us smoke too much. It would be well if we, all of us subjects of the charming Lady Nicotine, would refrain from offering sacrificial fires to her in public places of all kinds; streeet cars, assembly rooms, banquet halls, and all the rest of them.

Most of us, living in Chicago, would not care to have the permission to smoke on the front platform of street cars, or in the front car of the elevated trains, restored. These places used to be beastly filthy because of the spitting habit. Now, they are reasonably clean. Neither should one smoke, or even carry lighted cigars or cigarettes, in elevators, especially in department stores and office buildings where, often, women and others ride who are sensitive to smoke.

If we limit our smoking to the after-meals cigar, or pipe, and perhaps to the office (providing the secretary is not made ill thereby), it will be so much the better for us. Also, there can be no objection to smoking in the street. But, let us refrain from smoking in elevators, in medical meetings, during banquets and in such places where we jeopardize the comfort and health of our neighbors who have just as much right to be comfortable as we have, ourselves.—ED.]

AN ALL-AMERICAN HEALTH CONFERENCE

Health News issued by the U. S. Public Health Service, informs us that the first of a series of regional health conferences authorized by the International Health Conference in Cannes is to be held in Washington, D. C., December 6-13. It will be devoted to a consideration of venereal diseases which, according to conservative estimates, constitute one of the world's most terrible p!agues.

The conference is being organized under the joint auspices of the U. S. Interdepartmental Social Hygiene Board, the U. S. Public Health Service, the American Red Cross and the American Social Hygiene Association. Prof. William H. Welch of Johns Hopkins has consented to serve as president, and already assurances have been received that some of the foremost physicians and sociologists will participate. Prominent health officers and sociologists from all parts of North and South America will attend.

The conference will review past experiences and existing knowledge as to the causes, treatment and prevention of venereal diseases, and will formulate recommendations relating to a practicable three-year program for each of the North and South American countries participating.

In addition, it will make suggestions for putting such programs into effect.

In the words of Surgeon General Hugh S. Cumming, the United States is in the front rank of the countries which have organized against the Great Red Plague, and a consideration of the various measures which have proved of value in different communities will undoubtedly contribute much to further progress in the countries represented at the conference. More than any other important communicable disease, the spread of the Great Red Plague is inextricably bound up in a mass of social, economic, educational and recreational problems. The success thus far attending the campaign against the venereal diseases is due largely to the fact that this interrelation has been recognized and that the campaign has enlisted the cooperation of physicians and sanitarians, of sociologists, judges, educators, the clergy and good citizens generally."

ANTIVIVISECTION MISCHIEF IN CALIFORNIA

As we are about to go to press, we have received news of an initiative measure that will be upon the ballot in the state of California, at the general election, in November next. This act, which has been proposed by antivivisection supporters, should be, and is, generally condemned by physicians, veterinarians and live-stock owners.

Not only does the contemplated measure prohibit the manufacture and testing of biologic remedies within the state but, in its liberal interpretation, it will prevent, likewise, the use of biologic remedies upon healthy animals within the state, even though they may have been manufactured elsewhere. Our veterinarian friends will be prevented from carrying out such operations on healthy animals as castration, dehorning and tuberculin testing. Moreover, it would prevent the use, on healthy animals, of such prophylactics as antihog-cholera serum, black leg vaccine and similar products.

Physicians are interested in the proposed law because it would lead directly to the prohibition of prophylactic vaccination against smallpox, typhoid fever, diphtheria and other infectious diseases.

Moreover, physicians are keenly interested in any measure that prevents properly qualified investigators from using healthy or (in certain definite instances) diseased animals for the purpose of investigation and research. Animal experimentation, with proper restrictions, is a legitimate practice that has resulted in definite benefit not only to humans but also to animals. The unreasonable, visionary and even vicious machinations of antivivisection agents should not be permitted to succeed.

We are urging all readers of CLINICAL MEDICINE residing in the state of California to communicate with the representatives of their state legislature and to insist upon it that this vicious measure be killed.

THREE LITTLE-KNOWN PAIN RELIEVERS

Chamomilla
Colocynth
Chiropractic Adjustments

Let us order colocynth for sharp cutting pain, in the abdomen, such as comes to young people of both sexes during the season of green apples and other indigestible substances. Let the sufferer chew and swallow without water one 1/128-grain granule of colocynthin. The results of one dose will be pleasing to the giver and the taker.

Chamomilla is an excellent pain reliever to be given to little children, and to parturient woman at the beginning of labor. For the one who tosses from side to side and can not sleep (because of pains in all parts of the body), for nervous, crying, fretty children, this is the remedy. I give 5 drops of the mother tincture or of Lloyd's Specific Tincture. Mix in a glass of water. Dose: 1 teaspoonful every half hour till relieved.

Chiropractic adjustments of the spine are known to but few (more's the pity) and entirely unknown to a large number of physicians and surgeons who are the ones that could make the most intelligent use of them. From these adjustments, properly made, come prompt and satisfactory results, relief and comfort to the patient in an incredibly short space of time; also, to the astonishment or satisfaction of the doctor.

I am about convinced that, in Holy Writ, when it says that the "Elders were to lay hands on the sick and that they would re-

cover," it was not so much the prayers but an intelligent adjustment of parts out of place, like a dislocation or neuritis (which is a reflex from pressure) that was effective. I say this reverently. Cause and effect have preceded and followed each other ever since man became a reasonable, thinking being and, no doubt, for eons before.

When a torticollis, a headache, a goiter, even eye and ear trouble are treated and quickly relieved by proper adjustment of the cervical spine, we sit up and meditate.

Neuritis of the arms and shoulders are treated by adjustments of dorsal vertebræ. Cramps in the feet or lower limbs are at once relieved by adjustments of dorsal and lumbar vertebræ. Even sciatica, that most formidable of ailments, yields to spinal adjustment.

Speaking of sciatica, I suggest that you study the article on this subject published in the August number of CLINICAL MEDICINE.

For a quarter of a century, I have used the following in the treatment of sciatica and have not yet found a case of this trouble that failed to be permanently benefited by it:

Tincture Chamomilla ..... 10 drops
Water ..... 6 fl. ozs.
M. et Sig. Shake the bottle.
Dose: 1 teaspoonful every two hours.

Alternating with it (I prefer the homeopathic mother tinctures) I order the following:

Tincture colocynth ..... 5 drops
Water ..... 6 fl. ozs.
M. et Sig. Shake the bottle.
Dose: 1 teaspoonful every two hours.

For fifteen years, I have been using chiropractic adjustments of the dorsal and lumbar spine in sciatica and find it very helpful. The foregoing remedies and the adjustments will greatly simplify the treatment of this disease in your hands.

C. S. COPE.

Tacoma, Washington.

GOOD LOCATIONS FOR PHYSICIANS

Seeing that you like to be informed of locations that are going to be open for physicians, I am sending information as to Raymond, South Dakota, as I am retiring about the first of November next and this place will need a good live doctor. I have done well here. The collections are practically 100 percent and it is a very rich community.

Raymond is a town on the Chicago Northwestern Railroad, some 43 miles west of Watertown. It has electric lights, expects to put in waterworks next year. Population about 300; large surrounding territory; good high school, worth $25,000.00; new Presbyterian Church, just completed, $9,000.00; Presbyterian Manse; two banks, deposits of which are over $500,000; five elevators; cattle and hog yards. There are two butcher shops, three stores. Best soil in South Dakota.

I want $200.00 for good will and some office fixtures which I will not move as I am going to California. There are four nice rooms, upstairs over bank, especially fitted for doctor and family. There is one drug store. Good live American community.

S. D. SAUER.

Raymond, South Dakota.

We are informed of two locations in the state of Connecticut, there being an open country practice at Fal's Village, and also one at Salisbury, both in that state.

GONORRHEA IN TOWN AND COUNTRY

As to the difference between city and country gonorrhea, I do not believe that there is any. In the first place, a great many of the country boys get their gonorrhea in the city; and, again, when a boy or man gets a gonorrheal infection in the city, he first tells his friend, who, instead of advising him to see a doctor, tells him to use so and so, and the case gets worse instead of better; so that, when he comes to the doctor, he already has a posterior urethritis. This kind of a case can not be cured in twenty days. In the country, however, it is different. As soon as they notice their discharge, they go to the doctor immediately and they will consult no one else; they seem to be ashamed of having it. They obey instructions better than do the city patients; hence, a cure is obtained much more promptly.

At present, I am treating a man who has the following history. Had intercourse on a Monday night; the following Sunday morning, he noticed a slight yellow dis-

charge and burning urination. He came to me at once. Examination of the discharge showed gonococci. I put him on bicarbonate of sodium, 10 grains twice daily, for his burning; then I used Arhovin. This drug does as good work as santal oil, ("Santol"), but does not upset the stomach as santal oil does. It is put up in gelatine capsules which dissolve in the stomach much sooner than a tablet of any kind would. This is given every 4 hours. Locally there was no edema; I gave him a ¼-percent solution of protargol for irrigation, and, in less than four days, his discharge changed to a watery drop. On the ninth day, there was no more discharge and, now, on the twelfth day, his urine is clear with but a few shreds and no gonococci present.

This is one of the rare cases and is not the rule. However, because this man was married and did not want the trouble prolonged, he did what he was told. Only in this way could such a quick cure be obtained.

CHAS. H. J. BARNETT.

Philadelphia, Pa.

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[In most cases, the success or failure of treatment depends largely upon the patient, as has been intimated in earlier editorial comments. If a man will report to the physician immediately on noticing evidences of gonorrheal infection, and if he will obey his physician implicitly, the chances are ninety-nine against one that his recovery will be prompt and lasting.

Doctor Barnett's idea, that the young men in the country consult the physician immediately on noticing the first signs of illness, and that they obey instructions better than the city patients, does not quite accord with our own experiences. We have found that most of the young country bucks acquired their infection in the city and that they were too sophisticated to do the most evident thing, namely, to consult their family physician. Usually, they tried either drug-store stuff or things that were recommended by their "knowing" friends. At any rate, many of them still hold the insane idea that "a clap is just like a cold and will take care of itself." The sooner the young men can be educated to appreciate the truly serious nature of gonorrheal infection, the more quickly will they acquire sense and the more promptly will they report to their physicians and obey instructions.—ED.]

A STORY OF THE GREAT CLINIC

Line up at the window and get your white card,
Watch your step and be on your guard.
Then to desk A. B. C. D.; make your approach very careful,
May I come in? Just wait a few moments.
Then, you wait till you're thin.
With a little red card, you are sent on your way,
To get a large bottle and come the next day.
I came in the morning at ten by the clock,
And went away again until four, then quite forgot.
But, faithful, I rush to the clinic next morn,
And I wait in my seat till my heart's almost torn,
I am taken right in and examined with care
From the soles of my feet to the roots of my hair.
They go over my chest with a small rubber hose,
I'm dressed and undressed till I wear out my clothes.
If your stomach's in doubt you feast and you fast,
Then you're fed some white dope that looks like starch,
But tastes more like soap.
And, now, you eat string which is no joke at all,
For, your fate is decided by the yards off the ball.
There's a girl at each station who greets you like this:
"Sit down and I'll call you." You thank the kind Miss.
They are wheeled in and out by the lean and the stout,
Some only have goiter while others have gout.
If they find nothing wrong, then your teeth must come out,
At least two or three for the sake of the doubt.
The last desk is won and the end is in sight,
My case is decided for Radium Light.

I've waited my waits and crossed all the bars,
Then, I'm handed a bill, that makes me see stars.
So, I sit down and wonder just why I came,
The more time I ponder, the answer's the same:
There's no doubt at all—it's the Clinic's Great Fame.
—Written in the Bath Room—

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[The foregoing was written by a young lady who had made a pilgrimage to the Mayo Clinic. The humorous description of the various stunts to which the patients under suspicion of illness are subjected is so amusing that we venture to give publicity to the little "piece." In how far the conclusion of the writer is justified, we do not pretend to say. Probably, some people do go there merely because they want to be able to say that they have consulted the great Mayos. Still, the remarkable results of the Rochester institution are of such a character as to preclude any actual, serious criticism. The gentle sarcasm contained in the concluding three lines may pass, because it is not ill-natured.—ED.]

A DIMINISHING PROFESSION

The American Red Cross sees in the widening disparity between the increase of our population, and the decrease in the number of graduates from medical institutions, an added reason for promoting general training in first aid and accident prevention.

The present standard of premedical education has lengthened the time and increased the cost of medical training, thus curtailing to a large extent the yearly attendance at the medical colleges. In 1904, there were 28,142 students attending the various medical colleges of the United States, this being the largest number in any year during the period 1880-1919. The total number of medical students in the schools for the year ending June, 1919, excluding premedical, special and postgraduate students, was 13,052. There was a decrease in 1919 of 578 below that of 1918.

The high standard of efficiency established through the reclassification of medical colleges has caused the closing of many of the smaller and more poorly equipped ones. In 1906, there were 162 medical colleges in the United States; in 1919, there were only eighty-five recognized medical colleges. In 1903, there were 5,698 graduates from all medical colleges, one graduate for every 14,029 of population. This number has gradually declined, in spite of the increase in population, until, in 1919, there were only 2,656 graduates a decrease of fourteen below that of 1918—one graduate for each 40,230 people.

The longer hours and smaller remuneration of country practice have caused many physicians to move from the rural districts to the larger towns, where conditions are less difficult and remuneration is greater. Many practitioners, desiring to specialize, also are attracted to the cities from the rural districts.

That the high standard of medical education must be maintained, goes without saying, if we are to render efficient service to those suffering with disease. Nevertheless the shortage of practitioners has caused increased suffering in certain localities which is very severely felt. Those who reside in the sparsely settled areas are left to the care of untrained assistance, so that serious illness or loss of life often results. Numerous illnesses and injuries occur which, when improperly treated or if treatment is too long delayed, may prove fatal.

The American Red Cross believes that universal first-aid training would supplement the work of the physicians, take from them the burden of caring for unimportant injuries, to release their services for more serious cases. It would also place the victims of accidents in the physicians' hands in the best possible condition for future recovery. [From the American Red Cross News Service, August, 1920.]

THE BEAUTIFUL NORTHWEST

Sunstroke and Heatstroke

On July 6, I passed the medical-reciprocity requirements of the State Medical Examining Board of the State of Washington, and was formally admitted to practice in this wonderful evergreen state. The past year, my forty-fifth in practice, has been one good long vacation in which I was not awakened at night by calls nor annoyed, by day, by the jingle of the telephone. I went

back to nature and have to show a most wonderful garden. The vegetation is about the finest I have ever seen. Everything that grows in gardens, almost, we have in profusion. I have cultivated about three hundred square feet of surface. The high cost of living is not troubling us much.

We live in Tacoma, on Park Avenue. This is the main road to Mt. Tacoma. It is said that 60,000 automobiles have entered the Renier National Park this season. It is reasonable to suppose that more than 40,000 of these have passed along our street.

This, in a way, has been an eventful summer for me. On August 6, I completed one year's residence here. On August 5, I completed three score and ten years of life pilgrimage and am now past seventy. On July 6, I was admitted to practice in the state. On June 22, I completed forty-five years as Doctor of Medicine and am now well and hearty and well started in my forty-sixth year of practice.

What I started to write, was not an autobiography, but to say something about sunstroke or heatstroke, as aroused by an article in the last number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, just received.

The most reliable remedy for sunstroke or heartstroke is glonoin, or nitroglycerin. Let the patient take gr. 1/500 of glonoin. Crush the granule and place under the tongue. This will then absorb as quickly as after hypodermic injection. It dilates the capillaries and relieves excessive tension at one part. Follow this with the same amount of hyoscyamine. This latter will prolong the dilatation.

Prompt emesis and catharsis must follow, as the alimentary canal must be cleaned at once. Bathe the skin with epsom salt, one tablespoonful in a quart of water. Keep this up for an hour. Repeat bathings every few minutes, then follow with soap and water bath.

I consider morphine in these cases a dangerous remedy.

C. S. COPE.

Tacoma, Wash.

[We congratulate our very good friend, of many years' standing, Doctor Cope, on the occasion of his having negotiated successfully his transplantation from Michigan to the great northwest. It must be a beautiful country. Indeed, what we hear about it from Doctor Cope and from other friends tempts us strongly to follow him.

We wish for Doctor Cope many years of useful active work in the state of Washington, and we feel confident that he will continue to be, as he was in the past, an "active partner" in the CLINICAL MEDICINE concern, that is to say, a subscriber and reader who does his share toward supplying instructive reading matter.—ED.]

STATE-OWNED RADIUM

A statement made by Dr. Harvey R. Gaylord, one of the Directors of the American Society for the Control of Cancer, 25 West 45th Street, New York City, and Director of the State Institute for the Study of Malignant Disease, Buffalo, New York, informs the people of the State of New York on the stewardship of the purchase of 2¼ Grams of radium for which $225,000 was appropriated by the State, and announcement of which was made by Governor Smith, some time ago.

"The experiment in state ownership of a therapeutic agent, as exemplified in the purchase of this radium for social utility will have a far reaching effect. This is a development of state medicine to which no one can object and Governor Smith deserves the thanks of the State for what he did."

"Any citizen of the United States" said Doctor Gaylord, "may avail himself gratuitously, after October 15, of treatment with the 2¼ Grams valued at $225,000 recently purchased by New York State. Preference, however, will be given to citizens of New York State.

"The first Gram is now in the vaults of the Institute at Buffalo, and the appliances necessary for its use in the treatment of cancer are now in course of construction. The engagement of a competent physicist to work with this radium is also announced. The radium we are using is an American product, mined in Colorado, brought 2,900 miles across the continent in the form of 125 tons of carnotite ore to the extraction plant at Orange, N. J., where it was reduced by fractional crystallization to its present state.

"The value of radium has already arrived at a stage where States and, if neces-

sary, the Government should make radium available for cancer treatment gratuitously and beyond the reach of financial limitations. The advent of radium as a therapeutic measure is the most important forward step in the treatment of cancer.

"The State Institute, as a result of carefully controlled scientific experiments in its hospital, felt that the time had come when the State of New York should logically provide an adequate amount of radium for the Institute on the basis that its value is so definitely demonstrated that it should be made available without cost to the citizens of the State and that the opportunities for research should now be extended along practical lines. The State Institute has had, since 1914, an amount of radium sufficient for scientific study. Private philanthropy has given the Memorial Hospital in New York City a large amount of radium for scientific investigation and practical application for the past four years. The Cancer Research Commission of Harvard University has also had an adequate working supply. The advances made in these and other quarters have steadily strengthened the confidence in the use of this agent.

"The State of New York which, in 1898, took the lead by founding the first modern State cancer research institute in this country, should properly be made the first state to appropriate the necessary funds for the purchase of a sufficient amount of radium for the use of its citizens, having available for this purpose a center of cancer knowledge and fully equipped scientific research laboratories where its use can be made immediately effective, and from which scientific progress can be confidently anticipated.

"The usefulness of radium in the treatment of neoplasms is still in its infancy, but there are already certain kinds of cancer in which its use offers advantages and the results obtained are an improvement upon any means we have heretofore possessed. It must, however, be remembered that our main reliance in the treatment of cancer is surgery, although radium in combination with surgery frequently greatly improves the prospective cure.

"The scientific development of the last two years in the use of radium, largely through the work of Professor William Daune, of Harvard University, made available a means of using radium which has immensely strengthened its usefulness. This method is the use of the emanation of radium in place of the application of radium itself. This method is only available when you have at least one Gram.

"Cancer today is one of the most important diseases in the United States. It increases 25 percent every ten years. In the United States, 90,000 deaths occur yearly from it, being of equal importance to tuberculosis. In New York State about 800 deaths occur yearly.

"The purchase of the radium has other significance than merely its use for the treatment of cancer. It gives an opportunity for research and its use under scientific conditions is sure to increase our knowledge of cancer. While surgery still remains our main reliance in the fight against cancer, we can only hope greatly to improve the results of surgery by bringing the patient to surgical treatment at the earliest possible moment. This can only be accomplished by the diffusion of knowledge among the laity of the first beginnings of cancer. It is with such work as this that the Society for the Control of Cancer has particularly charged itself. It is felt by the Society that the advent of an alternative will overcome the reluctance of many cases to present themselves to their physicians. The Society represents 900 physicians and laymen and looks with great interest at the purchase and congratulates New York upon the step it has taken.

"The purchase of this radium by an American Commonwealth from an American Company, which has mined its ore in the State of Colorado, will bring still further to the fore the preeminence of America in the treatment of cancer. Buffalo will become a radium center. While Europe, through Madame Curie, first made the precious element known to the world, the United States has developed both the ore, its extraction and its use as a therapeutic agent. It is today in the forefront of treatment of cancer. This purchase may have a tremendous effect upon further progress in this direction."

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

The Art of Right Living

Common-Sense Comments on Health, Happiness and Longevity

15. Nutrition in Its Relation to Health

ORDINARILY, when we speak of a person being well nourished, we merely think of one or two important factors in the workings of the organism. One may think that the digestive process, as pertaining to the stomach, must be in good condition, or, perhaps, he may become experienced enough to consider that perfection of the whole digestive system, of which the stomach is only a part, is requisite to the best nutrition of the body. It is barely possible, however, that one might only consider the food supply of the body as the all-important element to be obtained in the end. Hence, the oft-repeated question, "What shall I eat?" or, "If I could only get my stomach to work, I would become strong."

I do not say that these special queries are not important; for, indeed, they are. The only trouble is, that they relate to only a limited part of the process. The study of nutrition is not merely the study of what we shall eat or how the stomach will handle it, but, rather, the study of the whole organism, and the making of it. The study of nutrition begins with the preparation of food for the body and the partaking of it. Next, the work of the digestive organs, as they reduce it to that condition so that the nutritive element can be absorbed and taken into the circulation. During its course in the blood channels, some of the vital organs, especially the liver, produce certain changes in the newly-formed products, which prepare some portions of it for the tissues, assimilation, and other parts to supply energy and force to the various and diverse activities of the body.

The lungs bear an important relation to the same work, as they supply material that is of equal importance to the building and repairing process. The final and all-important step is, the actual assimilation by each tissue of the element appropriate for its own use. It is success in all these steps that furnishes the parts of the body with tissue and force. A weak place at any point will interfere with the work and cause malnutrition, which may mean, the loss of strength and flesh, or it may mean the deposit of an abnormal amount of fat, or other local or general morbid growths.

In the hygiene of nutrition, one must study all these functions. In the preparation of food, simplicity and taste are points to be emphasized. The more simple the diet of nutritive food, the better it can be adapted to the uses of the body. The purpose of cooking of food is only, to put it in the best condition to be handled by the digestive organs. Taste is an important factor, as it is the main active stimulus in the digestive work. Care should be taken, however, not to pervert it, as then it becomes unsafe as a guide. The hygiene of the stomach is simple. When the right food has been properly prepared and properly eaten it passes from our guardianship.

The greatest point to be urged relative to the stomach is, non-interference. Give it its proper share of the nerve force—that means, not actively to use the nerve forces of the body in other work while the digestive processes are being started and

also not to exhaust them before taking a hearty meal. If this precaution is taken, the stomach will take care of its own work, provided that its work be not in excess of the needs of the body.

The other part of the digestive apparatus is alike faithful and capable. For the best action of the liver and the lungs, a good circulation is essential. The latter should not be impeded by clothing that prevents the free flow of blood.

Overwork or underwork will interfere with the trophic nerves, and prevent their properly-regulating tissue nutrition. Mental worry or constant overstrain by excessive work will exhaust nervous vitality and force and incapacitate the nerves to preside over the function of nutrition or any other function of the body.

Of course, it is not necessary to say that all dissipating habits, as, the use of liquor and tobacco and all other like poisons, come first in power to undermine the nervous system.

From these suggestions we conclude that, for the best nutrition, strict regard should be paid to the laws of hygiene of the nervous system, the circulation with its vital organ, also, the digestive system, and, last but not least, the hygiene of the diet.

Learn How to Live.

—

Do not clog the system by an oversupply of food. Never eat unless hungry. Never force yourself to eat a food because is has been recommended as a health food. Eat only such food as is relished. Be temperate in eating and there will be little cause for worry as to the effect of what you have eaten.

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Fruits, if eaten raw, should be ripe and of good quality; persons with feeble stomachs digest them more easily at the beginning of the meal; this is particularly true when warm foods make a part of the repast.

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If meats are eaten—a debatable question between strict hygienists and "other people" —take them at the noon-day meal, with or without vegetables, and in cold weather rather than in warm.

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Fruit stimulates and improves appetite and digestion, relieves thirst, and introduces water in to the system; acts as a laxative or astringent, stimulates the kidneys and supplies the organic salts necessary to proper nutriment.

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Fruits and vegetables should not, as a rule, be eaten together, that is, at the same meal; if they are so eaten, persons with feeble digestive organs will usually suffer.

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Food must be something more than wholesome, it must be nutritious, and any interference with its nutritious qualities must necessarily concern health.

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It is worth the trouble to set on the family table, not, courses of elaborate dishes, but, a wholesome, agreeable and yet economical diversity of food.

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Usually, the necessity for dieting means debility or abuse of the digestive organs, and dieting alone, while it will ensure a measure of comfort, will not cure the original trouble.

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Beginning the dinner with soup is the very best way to get the whole system in condition for assimilating a hearty meal.

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Fruit alone will not sustain life for any great length of time, but helps to furnish a variety in the diet.

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A clean and wholesome stomach is the fount of purity, integrity, sanity and energy both of mind and body.

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A regular course of public dinners would, in time, ruin the digestion of a rhinoceros or an ostrich.

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16. Chewing Food

IT has long been recognized that the mouth constitutes an important factor in the physiology of digestion, and this importance is increased by the knowledge that many chronic diseases are directly dependent upon absorption of pus from pus pockets at the roots of the teeth, or upon autointoxication through poisons originating in the intestinal tract.

The part which the mouth and its accessory structures play in digestion is, in fact, of equal value with that assumed by the remaining portions of the alimentary

canal, and this is of particular significance, because it is here, in the mouth, that the only part of the digestive process resides which is under voluntary control. You have control over your mouth, and the oral cavity is concerned with the grinding the food to the proper fineness; it regulates the temperature of the food and provides an admixture of saliva which, aside from moistening and lubricating the food, affords a means by which the organs of taste are excited and the digestion of the carbohydrates begun.

The sensation of palatability conveyed by this means has an important effect on the mind, increasing the potential energy of the entire nervous system, besides stimulating the flow of gastric juice, thereby improving the digestion in the stomach and rendering even small quantities of food more efficient and sustaining.

If you chew your food well, your appetite will improve, and appetite is necessary to good digestion.

Systematic mastication, therefore, is of particular value in "dyspepsia" and autointoxication; certain nervous disorders and chronic joint troubles which are believed to depend on faulty digestion will be especially benefited. Even when the diet is limited to fluids, the suggestion also holds good in a way, for, in this case, the liquid food should be taken in small quantities at a time, in order to gain the same advantages in the way of gradual introduction into the stomach and mixture with saliva which would otherwise be produced by the acts of chewing.

I have intimated here that food must be relished to do good. Food taken without relish is really a clog and a hindrance to the body rather than a nourishment. Appetite is necessary to the digestion of food, because, if the food is not relished, the saliva and gastric juices will not be freely secreted. The more you chew your food, the greater will be the flow of saliva; the more saliva is mixed with the food and swallowed, the greater will be the flow of gastric juice. If you do not like a certain food, but force yourself to eat it because it is recommended as a health food, you will probably do yourself positive injury. No matter what the food is, how plain, how simple, if it is relished and thoroughly chewed and mixed with saliva, it will do far more good in building up health and vitality than the most highly recommended health food that is so unpalatable that one must force himself to eat it.

Appetite is generally the best guide as to what we shall eat. I do not mean an appetite that has been perverted by all sorts of highly seasoned, rich and indigestible foods, but a natural, healthy appetite.

Don't abuse your digestive system. Do not clog the system by an oversupply of food. If you wish to keep well, eat moderately and only when hungry, chew up completely every mouthful of food, drink at least eight tumblers of water every day and no intoxicants, and take as much exercise as possible in the open air. Be cheerful and don't fret.

Learn How To Live.

—

When a man eats too fast, the food is not chewed well enough. It is passed into the stomach in such large pieces that so much time is required for the gastric juice to dissolve it from without inwards that it begins to rot, to turn sour, causing a long list of physical and mental maladies.

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Three fourths of all our ailments occur, or are kept in continuance, by improper eating, and by preventing the daily food, which is eaten, from passing out of the body, after its substance has been extracted by the living machinery, for the purpose of renovation and growth.

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That we all eat more than we can assimilate is unquestionable. How can we determine the right quantity? Instinct should guide us, but an abnormal appetite often leads us astray. Nature's plans are perfect if her laws are obeyed. Disease follows disobedience.

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One of the most important adjuncts to proper diet is perfect mastication. Every morsel of food should be so thoroughly chewed and mixed with the saliva, that it becomes a liquid before leaving the mouth.

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Life is a fine art, and harmony and repose are for those who have mastered the art.

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A fort may have brave men enough within its walls to repel any attack which may be made against it. A man may have

such a stock of high health as to resist the most destructive disease.

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Good living must have for its precedent a good appetite, and must be followed by a good digestion; and these can be obtained, in all attainable cases by pure air and exercise.

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If a meal is eaten with great deliberation, an expanding, heating, liquefying process begins and keeps pace with the meal, and the man does not feel like a gorged anaconda.

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Appetite is the most important factor in digestion, and when it is normal, there is a desire for some particular simple food accompanied by a "watering of the mouth."

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17. Eating Too Much

WHILE certain classes, owing to the stress of poverty, can not obtain the nutriment they really need, the majority of people eat too much.

Fortunately, a moderate degree of overeating does not appear to be markedly injurious. The digestive apparatus, though compelled to do more work than is really necessary, proves equal to the demands made upon it, and does not break down or get seriously out of order. This is but one illustration out of many that might be given, showing how the marvelous mechanism of the human body adapts itself to conditions more or less abnormal.

It is lucky for the average man that physiological laws are not of Medio-Persic inflexibility. He can violate them to a limited extent without incurring the penalty, though he finds that, if he goes beyond that point, the punishment is swift and sure.

Careful investigations prove that the daily "destructive metabolism," or, in plain English, the inevitable waste and wear of the body, which is the measure of the work it does, varies but little for different occupations. A diet of from twelve to fourteen ounces of chemically-dry food, if the ingredients are in proper proportion and really digestible, is sufficient to keep the average worker in good health. One part of nitrogenous to seven or eight parts of non-nitrogenous food is found to be a fair combination.

A very small addition of stimulants appear to increase the amount of possible work; but moderately free drinking diminishes it. Women eat less than men, after making allowances for differences in weight and work. Where a man eats nineteen ounces, a woman of the same weight and equally active habits eats only fourteen or fifteen ounces. This latter allowance, as will be seen from the figures given, is more than enough for a hard-working man, even when all meat is excluded from the diet. It is no uncommon thing, however, for a man of average size and activity to eat double this amount, or from twenty-five to twenty-seven ounces of chemically-dry food in a day. In fact, I do not hesitate to say, that the majority of people eat literally twice as much as they need.

If we do not "live to eat" we are very far from making it the law of our diet to "eat to live." The palate is tempted to intemperance by appetizing dishes when it would be fully satisfied with a normal amount of plain and wholesome food. Probably there are few people who will not have to confess that, often, the appearance of the puddings or pies revives the appetite which has been completely appeased by the meat and its concomitants in the preceding course at dinner. We feel that we have had enough, but, the new and savoury appeal to our love for the good things of the table is too much for us. We have been eating because we enjoy doing it. It is not necessary but it is "nice." Let us congratulate ourselves that, though gluttony and intemperance are bestial sins and can not escape their punishment, moderate overindulgence in eating is, as I have said, apparently a venial offense against the laws of health; however, let us beware of presuming too much upon the mercy with which nature tempers justice in the enforcement of these laws.

The high cost of beef has revived the question "Do we eat too much meat for our own good?" and, incidentally, do we eat too much food of all kinds? We are in the habit of smiling benignly when we speak of our friend the vegetarian; still, scientific investigation and experiment is coming to his rescue and demonstrating that, while possibly it may not be wise for

all persons to cut meat out of their diet, it unquestionably would be a great benefit to the race, physically, if the quantity of meat consumed should be materially decreased, and, too, if considerably less food of all kinds were taken into the stomach. It is quite surprising to those who have never tried it before how well they can get along without flesh food.

Nature never intended us to live as we do. She has provided simple food, in the shape of cereals, fruits, vegetables. If we conformed ourselves more closely to her established order of diet, we should be a happier and hardier race.

Learn How to Live

—

Never overeat. More injury is done to the stomach by quantity than by quality. A cup of tea or coffee would not be so injurious as a quart of "cereal coffee" or hot water. A small bit of mince pie is less harmful than an overdose of oatmeal. Because foods are wholesome, it does not follow that they can be taken in unlimited quantities.

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Do not eat too often, and never between meals. Two meals a day at an interval of six or seven hours is better for persons with slow digestion than more frequent meals. Food taken before the stomach has had time to empty itself and recuperate robs the stomach of needed rest.

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Be regular with meals. All the functions of life occur in regular cycles, and are never performed well when these cycles are disturbed. Whatever the interval or number of meals, regularity should be preserved.

Take time to eat. Most people eat too fast, too little attention being given to the enjoyment of the meal hour. Hasty eating is a habit firmly fixed by long years of practice, to overcome which requires determined and continued effort.

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Many people are so accustomed to loading the stomach beyond its normal capacity that they are never content to leave the table until the stomach is stretched by a large quantity of food and drink.

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Do not drink much with meals. Liquid, if in considerable quantity, favors hasty eating with deficient mastication, and, hence, imperfect admixture of saliva, and indigestion.

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When you have learned how you should eat, follow faithfully what you know to be right, never once yielding to temptation to indulge the appetite.

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Many diet reformers make the almost fatal mistake of overloading the stomach. Dilated stomach is due quite largely to overeating.

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If your digestion is not strong, confine yourself to a single kind of fruit at a meal. You can make the changes from one meal to another.

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Fruits and cereals are particularly suited to the morning and evening meals, and very little other food is required.

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Avoid the use of rich foods, pastries, sweets, and food prepared with special reference to gratifying the appetite.

TO BE free-minded and cheerfully disposed at hours of meat and sleep and of exercise, is one of the best precepts of long lasting.—Bacon.

Among the Books

PORTER: "EATING"

Eating to Live Long. By William Henry Porter, M. D. With an Introduction by Edwin F. Bowers, M. D. Chicago: The Reilly and Lee Company. 1920. Price $1.50.

"If more food is taken than can be digested, absorbed, assimilated, and transmuted by the liver and perfectly oxidized, the result must be that the oxygenating capacity of the system is exceeded, and, sooner or later, rheumatism, or some other form of malmetabolism, will develop.

"One of the quickest ways to exceed the oxygenating capacity of the system is, to eat too largely of those substances which are most easily oxidized, and which are mere heat and energy producers, such as sugars, starches, and fats.

"This robs the protein, or building substance, of the oxygen needed to properly convert and oxidize its elements, and it is the by-products formed by this robbery that produce the symptoms we know as rheumatism.

"Most rheumatics are prone to eat liberally of sweets and vegetables, which contain an overwhelming percentage of starch and sugar. These food substances, being easily transformed, exhaust the oxygenating capacity of the system, so that the final oxidation of the proteid compounds in the food is imperfectly accomplished.

"In the vast majority of cases, excluding focal infection, the only way in which any *permanent* benefit may accrue in rheumatism is, through a proper regulation of the diet."

In accordance with the foregoing views, the author of this remarkable book on diet postulates animal proteids and fats as suitable for patients afflicted with "rheumatism" and as being more easily digested than those of vegetable origin; moreover, as animal food, on the whole, requires a smaller amount of oxygen for its complete transmutation than does vegetable food, it is plain that animal food should be selected when disease processes are rampant within the system—and this applies to any disease process.

Therefore, the author recommends as suitable foods for sick people, milk, broth, eggs and meat; only secondarily the saccharine and starchy compounds of vegetable origin. As for milk, skimmed milk, or buttermilk, preferably the latter, are most useful, since they yield the largest amount of constructive material with the least expenditure of oxygen and vital energy; buttermilk is preferred because the milk-fat, which calls for a large amount of oxygen to "consume", has been removed. After milk, eggs should be included, and, next, meats of various kinds, including poultry, fish, oysters, clams, et cetera; and, finally, the starchy and saccharine compounds, preferably in the form of whole-wheat bread, which should be at least twenty-four hours old.

This diet, which is recommended quite logically from the position taken by the author through his book, even though it differs radically from that generally accepted in "rheumatic" affections, is the more astonishing as, according to Doctor Porter, potatoes especially, vegetables generally, and all forms of sweets and pastries, should be temporarily ruled off the diet list; where there is a tendency to recurring attacks of rheumatism, they should be kept off. Fruits are best omitted altogether as they tend to produce abnormal fermentation.

The foregoing offers a fair specimen of the author's independent position in the matter of dietetics, and bears witness to the originality of his teachings. We have been accustomed, in the instance of "rheumatic" diseases that we selected to cite in this review, to forbid strictly all meat products as being of evil in patients of that class. We have ordered vegetables and fruits freely and, of course, milk. Fancy now finding it stated in all solemnity and,

moreover, finding it explained and proved logically, that meatstuffs are most suitable for all conditions that are at all associated with what we used to comprise under the designation of the uric-acid diathesis. The things seems startling and wrong, still, it is so absolutely contrary to our accepted and accustomed views that it becomes attractive.

For, if we follow the author through his various ratiocinations, we can not but be impressed with the sense of his remarks and with the logicalness and propriety of his teachings. To cite a striking instance:

"If a person eats too much, he takes in more food than he can oxidize. If he doesn't get sufficient out-door exercise, he invites imperfect oxidation. If he has shocks and undue strains upon his nervous system, these disturb the circulation and digestion and prevent the free introduction of oxygen into the system, so that sub-oxidation follows as a natural course.

"The symptoms of the lesions we class as gout, rheumatism, diabetes, et cetera, are all conditions of under-oxidation and result from an insufficient amount of oxygen being taken into the system to completely burn up the end-products of food. These abnormal deviations in oxidation may be transitory or permanent; when they are continuous, well-defined disease results."

Perfectly simple, is it not? and nothing that we can object to.

While in this there is nothing startling, there are various remarks, various teachings of the author that we need to think over before being able to accept them. They are so unusual. Not but what in time we are forced to side with him in his "different" opinions. It is startling, for instance, when he condemns potatoes as an acceptable staple article of diet for the reason that they are too easily digested. That seems rather a Hibernian reason to offer, and, yet, it is justified on the ground that, in the extremely ready oxygenation of potatoes, most or all of the available oxygen is used up, with the consequence that none is left for the more difficult proteids. So, then, the objection to potatoes is well substantiated.

Of course, there is nothing particularly new or unusual in the declaration that milk is an excellent food—for infants, but that it is serviceable in older children or in adults only for limited periods of time.

Doctor Porter does not think very much or very highly of the current and general knowledge possessed by people, even including physicians, concerning dietetic requirements. Indeed, according to him, the ignorance of the average man or woman (he might have added, of most physicians) on the subject of food is almost unbelievable. He submits that there are probably more crazy ideas on the subject of diet than on any other subjected connected with health.

From the introductory remarks of this review, it will be seen readily that vegetarians will not be exactly pleased with this volume. Indeed, the benefits that can be attributed to vegetarianism are extremely limited; while, as Doctor Porter explains in great detail and with many potent arguments, its disadvantages are great. He tells us that he has known only one Simon-pure vegetarian in all his life; that he was a peaked, puny, nervous crank. For some reason or other, he got ahold of some of Doctor Porter's teachings and mended his ways, even to demolishing healthy, juicy Porterhouse steaks, whereupon his health and his temper promptly were mended correspondingly. He became quite a human person.

The Reviewer is glad to see Doctor Porter pay his respects to the powerful calorie. For years, patients have been abused, tyrannized over, starved by the divine calorie. As long as a certain amount of calories was ingested with a variety of foodstuffs that quite arbitrarily was designated as a "balanced ration", the doctor was quite satisfied that he had done the right thing. It is only recently that we have come to see the fallacy of the reasoning processes by which the food supplies furnished the body were measured and estimated merely in heat units. Just as if the animal (human) organism were a delicate bit of machinery (which it truly is) and nothing more. Just as if, being a delicate bit of machinery, it did not require anything else to "keep agoing" than just a suitable quantity of properly selected "fuel".

Thus, dietetists and physiologists who reason along that line forgot that the most delicately adjusted and the most perfectly constructed machine can be kept going, even with the most perfectly selected fuel,

only if the process of combustion in the boiler is started through an outside agency. In the human organism, this driving force—the vital force is an essential part of the whole. It is not sufficient to merely supply fuel, to fill the boiler, and to take care to remove clinkers and ashes, but, it is essential, likewise, to take account of the vital processes that regulate the combustion and it is unavoidable to supply nerve material out of which nerve force, for instance, can be engendered.

It is a good thing that Doctor Porter's efforts (the Reviewer came near calling them iconoclastic) bring about the deserved dethronement of the calorie which with all its real value has been sadly overrated because it was looked upon and utilized in a one-sided manner. Indeed, the real test of a food is not in its chemical formula or in its socalled calorie value but it lies in its digestibility, its adaptability to the body requirement and, we may add, in its assimilibility. Since, to state the subject concretely, vegetable foods on account of their complex construction are more difficult to digest, to absorb and to assimilate than animal foods, they are less economical and less suitable for use.

Altogether, there are many delightful and novel assertions to be found in this book which is written in a bright, chatty style, even though it is not always quite easy to read. After studying it, during leisure hours, for several weeks, we have come to revise our old idea of the justice of Feuerbach's system: *Der Mensch ist was er isst* (man is what he eats). It will be recalled that Oliver Wendell Holmes objected to this by saying that "if I eat chicken, I do not become chicken, but the chicken becomes me." Yet, Porter seems to think that Feuerbach's opinion, after all, is not so extreme but that it contains a whole lot of sense.

The mere fact that his teachings and views are at variance with, and often in distinct contradiction to, the prevailing opinion stamps them neither as wrong nor as correct. The author's reasoning appeals to us as logical and the best way will be to investigate it carefully by following his advice and regulating the dietetic treatment of our patients, at least for a sufficient period of time, in strict obedience to his directions. At any rate, the Reviewer wants to urge his readers to get this little book, by all means, and to read it. Then, *study* it and, lastly, let your patients buy and study it likewise. It will help you a lot.

NORRIS-LANDIS: "PHYSICAL DIAGNOSIS"

Diseases of the Chest and the Principles of Physical Diagnosis. By George William Norris, M. D., and Henry R. M. Landis, M. D. With a Chapter on the Electrocardiograph in Heart Disease by Edward B. Krumbhaar, M. D. Second Edition, Revised. Philadelphia and London: W. B. Saunders Company. 1920. Price $8.00.

This textbook contains four parts, the first of which deals with the examination of the lungs, while the second is devoted to the examination of the circulatory system. The third part contains a discussion of the diseases of the bronchi, lungs, pleuræ and diaphragm; and the fourth with diseases of the pericardium, heart and aorta. The volume will be of especial interest to tuberculosis physicians and to those dealing more especially with diseases of the chest organs. It is very complete and dependable.

CHURCH-PETERSON: "NERVOUS AND MENTAL DISEASES"

Nervous and Mental Diseases. By Archibald Church, M. D., and Frederick Peterson, M. D. Illustrated. Ninth Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders Company. 1919. Price $7.50.

Here is another book that has been well and favorably known for many years and is presented in a new edition. It is only necessary to announce that a revised edition of Church-Peterson's textbook on nervous and mental diseases is available.

DACOSTA: "MODERN SURGERY"

Modern Surgery, General and Operative. By John Chalmers DaCosta, M. D. Eighth Edition, Revised, Enlarged and Reset with 1177 Illustrations, Some of them in Colors. Philadelphia and London: W. B. Saunders Company. 1919. Price $8.50.

DaCosta's "Surgery" does not really require an introduction, having been before

the medical profession since 1894. It is one of the standard one-volume treatises on surgery, and this latest edition has been revised so as to include the lessons of the war. As a matter of course, it is quite impossible to present a complete treatise on surgery in a single volume, and the author, undoubtedly, has had a difficult task in selecting that which shou'd be included and determining that that might safely be excluded. Still, the Reviewer has no hesitation in saying that "Da-Costa," at the present time, is that textbook on surgery that is most serviceable to the general practitioner and occasional surgeon.

HIRSCHMANN: "DISEASES OF THE RECTUM"

Handbook of Diseases of the Rectum. By Louis J. Hirschman, M. D. Illustrated. Third Edition, Revised and Rewritten. St. Louis: C. V. Mosby. 1920. Price $5.00.

The Reviewer is glad to have the word of a colleague, who devotes particular attention to diseases of the rectum, that Hirschman's handbook is one of the best available on the subject. Indeed, we are greatly impressed with this volume and with the teachings propounded.

The study of diseases of the rectum still is neglected altogether too much by the general practitioner. It should receive more attention and, to that end, the newer textbooks on the subject that are available are useful inasmuch as the subject has been cleared of much that was wrong in conception and technic.

ALBRIGHT: "RECTAL DISEASES"

A Practical Treatise on Rectal Diseases, Their Diagnosis and Treatment by Ambulant Methods. By Jacob Dissinger Albright, M. D. Illustrated. Chicago: The Adams Publishing Company. 1917. Price $4.00.

The older readers of CLINICAL MEDICINE will greet Doctor Albright's name with pleasure. Some years ago, he was not only a frequent contributor to CLINICAL MEDICINE but also published a journal of his own, supplementing his book on "The General Practitioner as a Specialist." Having devoted years of study and practice to the treatment of rectal diseases, Doctor Albright is well qualified to transmit the information acquired.

WIMMER: "PSYCHIATRIC-NEUROLOGIC EXAMINATION METHODS"

Psychiatric-Neurologic Examination Methods; With Special Reference to the Significance of Signs and Symptoms. By Dr. August Wimmer. Authorized Translation by Andrew W. Hoisholt, M. D., St. Louis: C. V. Mosby Company. 1919. Price $2.00.

This little volume forms a very complete work of reference for guidance in the examination of the insane. While it is mainly a handbook for those who have the care and treatment of the demented, it is, nevertheless, a valuable work for the library of the general practitioner, as a majority of the insane come first under his observation. The author gives special attention to the significance of signs and symptoms. He gives a very complete schedule of directions for the study of both the psychic and somatic condition of the patient. Of unusual interest are his discussions of motor disturbances, abnormal muscular movements, and disturbed reflexes. This book marks a great advance since the day when a patient was either sane or insane, according to the degree in which his actions departed from the standard of sanity set up in the popular mind.

ANDERSON: "AVIATION"

The Medical and Surgical Aspects of Aviation By H. Graeme Anderson, M. B., Ch. B., F. R. C. S. With Chapters on Applied Physiology of Aviation by Martin Flack, M. A., M. D., and The Aero-Neuroses of War Pilots by Oliver H. Gotch, M. B., Ch. B., and an Introduction by The Right Hon. The Lord Weir of Eastwood, P. C. London: Oxford University Press. Price $5.00.

KELLOGG: "PRACTICAL HEALTH TOPICS"

Dr. Kellogg's Lectures on Practical Health Topics. Volume II. The Monster Malady: Cancer the Coming Plague of the Race. Battle Creek, Michigan: Good Health Publishing Company. 1913.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

Referring to Query No. 6516, I will say that, a number of years ago, I saw a man taking out corns by the use of a liquid that he called "Oil of Joy." He would apply the fluid to and around the corn and in four or five minutes loosen the corn around the edges, then lifting it out and leaving the skin smooth and thin, entirely without any abrasion. There would merely be a little pit where the point of the corn came from. There did not seem to be any appreciable pain. The formula must have been a secret one; at any rate, the man would not give any information as to what it contained.

G. H. FRENCH.

Carbondale, Ill.

[The "Oil of Joy" with which we are familiar consists of: alcohol, 4 pts., gum camphor, 1-2 oz., oil of sassafras, 1 oz., oil of cedar, 1 oz., tincture of guaiac, 1 oz., tincture of capsicum, 2 ozs., water of ammonia, 4 ozs., chloroform, 3 ozs., and, as you can readily see, there is nothing in the formula which would exert an instantaneous influence upon a corn.

Here it would seem that our idea holds good, namely, that the local anesthetic action of the preparations enables the operator to remove the corn without causing the patient undue distress. This, we believe, is the secret of virtually all the rapid "corn liniments" used by peripatetic chiropodists.]

Queries

QUERY 6525.—"Vesical or Ureteral Spasm?" A. C. B., Oklahoma, presents the case of a male (single; twenty-five years of age), who has a good history, has lived a clean life and is enjoying reasonably good health, with the exception of the trouble described. He is a merchant but not of sedentary habits. Chemical analysis of urine negative.

"For the last years, he has been having, at intervals of from one to two months, a drawing feeling to the extent of becoming quite painful on passing water, with a sensation as though there was a cord connecting the bladder with the umbilicus, and which becomes so severe during micturition, that he is forced to lean over which seems to slacken this cord-like feeling.

"More or less pains seem to radiate out from both, the bladder and umbilicus, and some along the line of the cord from the umbilicus to the bladder. This condition continues for a day or so and gradually gives way, leaving the patient apparently well again. Treatment seems to have had but little effect.

'I have only recently taken up the case and recommended a preparation containing cannabis indica, hyoscyamus, gelsemium and nux vomica, with apparently some relief, or else this attack was lighter than usual."

Unfortunately, the facts presented by you are insufficient to enable one (even though used to drawing conclusions at long range) to decide just what pathological condition could obtain to cause a "drawing sensation on urination" at certain and prolonged intervals. It is just

possible, of course, that there is some constriction of the ureter or, possibly, calculi are being voided at intervals; or, there may be a small calculus impacted in the ureter.

Under the circumstances, we believe that a thorough examination of the urine would prove informative and we suggest that you send four ounces taken from a twenty-four-hour output to our pathologist for analysis. It might also be a good idea for this man to submit to a cystoscopic examination, although a radiograph might prove distinctly informative. It is reasonable to assume that the spasmodic condition which seems to obtain would yield promptly to full doses of benzyl benzoate which is an antispasmodic of marked efficiency.

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QUERY 6526—"Tabes Mesenterica or Chronic Colitis?" J. C. H., Arkansas, desires information regarding a female patient who has been suffering for the past two years from stomach and bowel trouble. "We are not," he says, "able to tell just what it is. She is constipated, indeed it is almost impossible to move the bowel; both stomach and bowels feel full; they burn and throb. She complains of a drawing feeling, sometimes; at others, she feels as though the stomach were collapsed. When she gets up in the morning, the stomach and throat feel as though they were 'cooked and drawn up'; she tries to belch a little; quite a lot of gas passes from the rectum; at times, stomach and bowels 'roll around like a ball.' She has nervous attacks with choking and difficult inspiration; also cold sweats. After eating, the stomach feels heavy and very tender; the bowels likewise. She passes lots of mucus by the bowels, food passes undigested; there is no evidence of proper activity on the part of the liver. Mouth and nose are dry at night. During the night, her temperature drops to 96; in the morning it rises to 97 2/5; at about three o'clock in the after noon, it rises to a 100 or 101° F. Kidneys normal; appetite good. Dieting seems to do no good. Taurocol Compound, pepsin, bismuth with nux vomica and all the mild laxatives do no good, indeed, they all hurt the stomach and bowels. Can you tell what the trouble is and what to give her? If you can not gather enough from this report, and think best, I will send stomach contents and feces. She has been said to have kidney trouble and hardening of the arteries. One man says one thing and another something else and I do not know just what is the matter with her; so, if you can tell me where and what the trouble is and outline a treatment, I certainly shall appreciate it.

"This patient is forty-nine years old, passed the change of life two or three years ago. Present weight 135 pounds—a loss of about fifteen pound in the past two years. Had all of her teeth taken out about six months ago, and now has false teeth. The action from the bowels, as I have said, consists mostly of mucus. Some feces have the appearance of fat meat, some a pink cast and others a smutty color. The patient passes about two or three ounces of mucus at a time; bowels hardly ever move without oil enemas, which, yet, seem to do no good."

Were it not that you definitely state that this woman's temperature drops to 96° in the morning, rises to 97-2/5° at noon, and by three 'clock in the afternoon to 100 or 101°, we should be inclined to diagnose this as a typical case of intestinal catarrh. The fact, however, that you have an afternoon temperature and that there is extreme tenderness upon pressure over the entire abdominal region, compels us to point out the possibility of an existent tabes mesenterica.

Under the circumstances, we would certainly refer the patient to a competent radiologist and, naturally, not only should the feces, blood and urine be examined, but a test-meal given and the stomach contents examined at intervals thereafter.

It must be borne in mind, in this connection, that chronic catarrh may have an insidious onset. Fecal accumulation, notably scybalæ, may be a cause of chronic colitis, as may also pressure of tumors, such as, fibroid of the uterus. Chronic catarrh may be secondary also to disease of the lungs (especially tuberculosis) and to diseases of the heart and kidneys. Chronic appendicitis frequently obtains and several cures of chronic colitis have followed appendectomy.

In every case, the rectum should be examined. Ulcer, fissure or hemorrhoids may not cause particular local manifestations but give rise to catarrh higher up. Sometimes, the symptoms point to an involvement of the descending colon and

sigmoid. Examination will reveal an ulcer high in rectum.

Of course, in chronic enteritis, we have to deal with a hyperemia and there is invariably an increased secretion of mucus. In cases of long duration, this may be gray or even slate-co'ored by extravasation of pigment. Perhaps the chief diagnostic symptom of chronic intestinal catarrh is, the abnormal character of the feces, especially, the presence of mucus. Diarrhea is not a constant symptom. As a matter of fact, marked constipation may obtain, normal stools being voided only once every two or three days and, not infrequently, only after a cathartic. Again, constipation and diarrhea may alternate. Occasionally, we may have constipation for weeks or even months, and then a period of diarrhea. Probaby in these cases there is an acute exacerbation of the catarrh.

The majority of patients complain of feelings of discomfort or slight pain in the abdomen, such symptoms being most marked after eating. At times, these sensations may disturb the patient an hour or so before rising in the morning.

There is more or less bloating which may be relieved by the passing of flatus, and occasionally the flatulence may be severe enough to cause shortness of breath, palpitation or vertigo.

Borborygmi are often present.

The general nutrition sooner or later becomes impaired, especially if the small intestine is involved. The patient feels weak, disinclined to effort, is irritable, depressed and occasionally melancholic. There is, of course, loss of weight, anemia, slow pulse, co'd extremities, attacks of severe headache. Many of these symptoms are, in a large degree, due to autointoxication.

In differentiating ordinary intestinal atony with constipation, it is well to remember that there is an absence of mucus; though, of course, if impaction is neglected, local intestinal catarrh may be set up. In malignant disease of the intestine, cachexia is marked; and, with intestinal ulcers, there are decided pains, local tenderness, and pus and blood in the stools. When enteroptosis exists (and it frequently does,) considerable relief will follow the correction of this abnormality.

Taking all things into consideration, we would strongly advise that you do not attempt empirical treatment in this case, but insist upon a thorough examination by a competent consultant.

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QUERY 6527.—"Substitute for Cocaine in Marsdens Paste." M. J. R., Canada, wishes to use Marden's paste on a small epithelioma. The patient appears to have a peculiar idiosyncrasy to cocaine, as is evidenced in its use for the extraction of teeth.

"Leaving out cocaine and also opium and all its derivatives, what have we left," our correspondent asks, "that I might mix in this paste and have as good or nearly as good a pain-reliving effect?"

"On account of our strict Canadian laws, opium or its derivatives and cocaine or any of its salts have been so restricted as to make the thing somewhat a nuisance and I have been avoiding their use as much as possible."

In using Marsden's paste for the removal of a small epithelioma, as you intend doing, it is quite possible to replace the cocaine, to which your patient appears to have an idiosyncrasy, by anesthesin.

Anesthesin is para-aminoethylbenzoate, and is, we are assured by our research chemist, even more suitable in the combination than is cocaine.

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QUERY 6528.—"Hyperhidrosis in Aged Patient." V. M., Ohio, forwards a specimen of urine for examination. The patient is a female, eighty years old; rather feeble but going to her meals regularly and walking out of doors every day. She has no discoverable organic disease but some arteriosclerosis. Blood pressure, systolic 160; diastolic, 90. Appetite rather poor. Bowels regular.

Her great trouble is a pronounced tendency to free perspiration. She perspires on the slightest or without provocation and wakes up every night with her clothing wet through so that she has to get up and change. Any emotion or excitement, even talking to a friend, makes her break out in a sweat.

It is not an easy matter for us to prescribe intelligently for this individual without a clearer conception of underlying conditions, but, it is more than likely that the hyperhidrosis is an evidence of vasomotor disequilibrium and will yied more or less completely to the administration of strych-

nine, perferably the valerate, in alternation with zinc phosphide.

It might be an excellent idea to direct the old lady to sponge her entire body with a mild boric-acid solution before retiring. We have had excellent results in some cases by adding a few drops of formaldehyde to each pint of solution.

Were we in charge of this patient, we would regulate her diet very carefully and give b. bulgaricus bouillon three times daily for several weeks. This may correct an existing intestinal fermentation.

As she seems to be extremely nervous, we would, in addition to the strychnine and zinc prosphide, be inclined to prescribe sumbul in rather full dose. Scutellaroid might also prove of benefit.

As the examination of this patient's urine reveals marked autotoxemia, the presence of hyaline and granular casts, cylindroids, and many bacilli coli and staphylococci, it would be an excellent idea to secure thorough intestinal elimination and to administer, thereafter, arbutin, gr. 1, three or four times a day.

Despite the advanced age of this patient, we would also be inclined to give an autogenous bacterin, the dose being very small at first and gradually increased until moderate reaction is secured.

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QUERY 6529.—"Autotoxemia." F. E. B., North Dakota, is treating a man, about fifty years of age, who has chronic constipation and has been so afflicted for years. Had no suspicion of kidney trouble until an examination of urine disclosed it. From all outward appearances, he seems perfectly healthy. Does not have sufficient exercise, leading a more or less sedentary life. He states that he has been obliged to use purgatives for years and constipation has grown worse in later years. Aside from this and the condition revealed by uranalysis, there does not seem to be much of clinical importance to report.

"Under the circumstances," our correspondent asks, "would you say that the presence of pus, hyaline casts, bacteria, in his urine indicates a chronic nephritis? What treatment would you advise, taking into consideration the chronic constipation and the kidney difficulty disclosed in report? One important thing that may have some clinical importance is, that this gentleman has been suffering from a rather severe eczema."

The mere fact that hyaline and a few granular casts are present in this case does not definitely evidence the existence of chronic nephritis, still, there is no question that there is more or less renal congestion, and this may be due, to a great extent, to the autotoxemia of intestinal origin from which the patient evidently suffers.

On general principles, we would secure very thorough elimination, preferably by the administration of blue mass and soda, gr. 1-2, and podophyllin, gr. 1-6, half-hourly for six doses every second or third night, followed by a saline the next morning. After a week or so, we would then commence the administration of mineral oil, giving 1 ounce the first thing upon rising each morning, with some such combination as: podophyllin, gr. 1-4; leptandroid, gr. 1-2; irisoid, gr. 1-4; extract, nux vomica, gr. 1-16; capsicum, powdered, gr. 1-3, on retiring two or three times a week. Three times daily, between meals, the patient should receive 10 or 15 grains of sodium sulphocarbolate, the drug being continued for two weeks. About half an hour before meals, and with four ounces of water, give arbutin, grs. 2.

Diet the patient carefully. Insist upon his taking more exercise and have him take a salt- or Epsom-salt spongebath, on retiring, every third night. This should be followed by brisk rubbing with a rough towel.

We believe it would be an excellent idea, to administer an autogenous bacterin. There is little question in our mind that the eczema from which your patient suffers may be regarded as an evidence of autotoxemia and we believe that this condition will be materially improved by the treatment suggested.

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QUERY 6530.—"Sciatica. R. R. S., Missouri, has for about six months been troubled, and that quite badly, with "sciatic pain" in left hip, running down to and including the knee. "I am," he writes, "doing an extensive country practice, movement relieves the pain, but it begins as soon as I lie down at night. A short time after this trouble began, I would have to get up and walk the floor, getting worse

from day to day. I took as high as 3-4 grain of morphine with hyoscine and cactoid each night for about a week, when the pain became less and I have not taken any since. Now, for about a week the pain has become bad again. However, I have not taken any morphine. My thigh begins to feel sore when I walk; when I grasp the thigh with my hand, it feels quite sore. The urine is all right, appetite good, bowels very regular. Have reached the top and started down the hill of life.

"Will now tell you what I have taken. Have tried sodium salicylate and macrotys. Would get relief only while taking it. I then began taking iodized calcium, in 1-grain tablets, fifteen at a dose. I thought at one time that this remedy was doing the work, but, no, for a week now it is worse than ever. For the pain during the last week, I have been using acetanilid compound, two to six tablets at night. Last night I took ten tablets of benzyl benzoate and six acetanilid compound. Have just begun Sherman's bacterin No. 35 and have taken a second dose. You must understand that the six tablets of acetanilid were not taken in one dose. The benzyl benzoate was taken in two doses. Advice will be highly appreciated."

We regret extremely to learn that you are afflicted with that most intractable, and distressing malady, sciatica.

Without attempting to enter into a discussion of the etiology of this affection, we may point out that the name of the remedial agents and procedures that have been proposed and advocated for its relief at various times is Legion. Some of these are successful in a number of cases and fail in others.

On page 517, of the August issue of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, you will find a rather interesting editorial on this subject and, after reading it, we believe you will realize that the first thing to do is to ascertain the condition of the body chemistry.

We certainly would not continue to take large doses of acetanilid compound and benzyl benzoate.

On general principles, you might do worse than adopt the following procedure: Take calomel, gr. 1-6, podophyllin, gr. 1-6, bilein, gr. 1-8, and strychnine arsenate, gr. 1-250, at 7, 8 and 9 p. m., and a full dose of salithia the next morning on rising. Repeat this medication every third night for two weeks and, for one hour before retiring, apply, from the sacrum to the knee, a bath towel wrung out with a strong solution of epsom salts; then inunct along the course of the sciatic nerve one dram of this ointment: guaiacol, grs. 40, methyl salicylate, grs. 40, menthol, grs. 3, lanum and petrolatum to make oz. 1.

Every three hours during the day, take: salicylic acid (natural), gr. 1, iodized calcium, gr. 1-3, colchicine, gr. 1-250, bryonin, gr. 1-128, macrotoid, gr. 1-12, boldine hydrobromide, gr. 1-64, aromatics, q. s., with four ounces of hot water, and for three days, a teaspoonful of Sodoxylin dry on the tongue, swallowed with water, about one-half hour before meals. Rest three days and repeat.

It is unnecessary, of course, to point out that it is essential to exclude muscular strain, prostatic hypertrophy, proctitis, and even subluxation of the vertebræ.

In certain intractable sciaticas, the administration of the streptococcus bacterin proves helpful.

IMMUNITY RESULTS FROM TOXIN-ANTITOXIN INJECTIONS

W. H. Park (*Proc. Soc. Exper. Biol. and Med.*, N. Y., 1919, 16, 116) states that three injections of toxin-antitoxin mixture in diphtheria-susceptible children produced sufficient immunity in 90 percent of the cases to give a negative Schick reaction. In the remaining 10 percent, a second series of injections is necessary, but this will produce immunity. This immunity has been found to last three and one-fourth years. The author has also shown that babies may be immunized passively by immunizing the mother before parturition. In these cases, 70 percent of the infants were immune. Only 30 percent of the controls were immune. It is, therefore, possible to immunize the unborn child against diphtheria by injecting the mother with the toxin-antitoxin mixture. In 70 percent of the cases, also, no local or general reaction occurs in infants or small children, in contradistinction to adults who frequently show reactions following the injections. [*Abstr. of Bact.*]